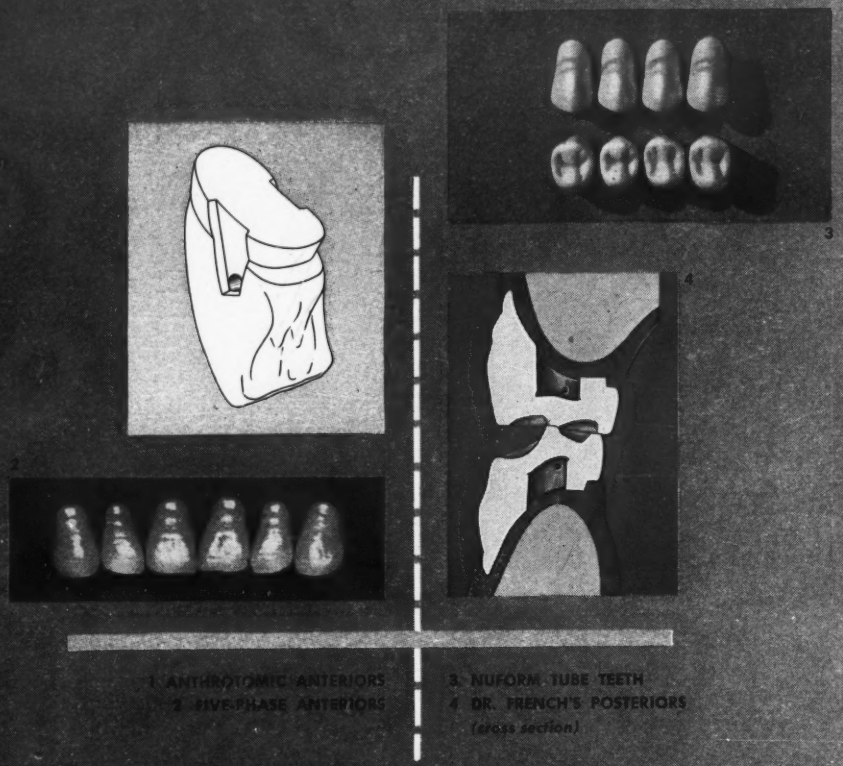
DENTAL



1 ANTHROTOMIC ANTERIORS
2 FIVE-PHASE ANTERIORS
3 NUFORM TUBE TEETH
4 DR. FRENCH'S POSTERIORS
(cross section)

USE THE YELLOW TO SEE THE RED
USE THE RED TO SEE THE YELLOW
USE THE LIGHT TO SEE THE DARK
USE THE DARK TO SEE THE LIGHT

To eliminate the "guesswork" factor in matching tooth colors, a method of *contrast-comparison* is built-in the Veri-chrome Color System. The procedure is simple, quick and absolutely accurate. Tooth color selection by *contrast-comparison* is possible only with the Veri-chrome Color Guide because of its systematic arrangement of dominantly yellow and red tooth colors in progressive saturations and because Veri-chrome Natural Tooth Colors have *controlled color brilliance.*

BE SURE TO SPECIFY THESE TEETH WITH THE VERI-CHROME COLOR GUIDE

Veri-chrome

tooth colors now available in

FIVE-PHASE ANTERIORS ANTHROTOMIC ANTERIORS DR. FRENCH'S POSTERIORS
NUFORM ANTERIORS AND POSTERIORS

UNIVERSAL DENTAL COMPANY 46TH AT BROWN STREET • PHILA 39 PA

FIVE-PHASE ANTERIORS ANTHROTOMIC ANTERIORS DR. FRENCH'S POSTERIORS
NUFORM ANTERIORS AND POSTERIORS

THE DENTAL Digest

VOL. 52 NO. 10

October 1946

Lower Denture Technique Using a Combination Casting of a Metal Alloy and Acrylic 538
W. E. Wilson, D.D.S.

Specific Infections of the Hand in Dental Surgeons: Notes on Three Cases (An Abstract) 543
H. F. Humphreys, L.D.S.

Unusual Case of Dental Interest: A Dermoid Cyst, *George A. Morgan, D.D.S.* 544

The Full Denture Onlay in a Case of Acromegaly, *Zoltan Nemeth, D.D.S.* 546

Instructions for Prosthetic Patients (An Abstract) 548
Commander Frank E. Jeffreys (DC) USN

Treatment Plan for a Difficult Immediate Denture Case, *Jerome M. Schweitzer, D.D.S.* 550

Clinical and Laboratory Suggestions 558

1. Application of Silver Nitrate to Incipient Caries. 2. Extension of Lingual Flanges on Impression Trays. 3. Position of Film in the Lower Third Molar Area. 4. Denture Repair Without the Use of Tinfoil. 5. A Circular Bur Block. 6. An Amalgam Matrix.

The Editor's Page ..... 549 Contra-Angles 560

Sulfanilamide and Gum Tragacanth in Immediate Denture Prosthesis (An Abstract) 572
L. A. Westwater, L.D.S.

EDWARD J. RYAN, B.S., D.D.S., *Editor*
MARIAN ZIERATH, B.S., *Assistant Editor*
708 *Church Street, Evanston, Illinois*

About Our CONTRIBUTORS

William E. Wilson, D.D.S. (St. Louis University, School of Dentistry, 1919) has for more than a decade done research in the field of plastics. His newest development is the reinforcing of acrylic in the lower denture with an insert of metal alloy. An article entitled Lower Denture Technique Using A Combination Casting of Metal Alloy and Acrylic provides the step-by-step procedure which Doctor Wilson follows.

George A. Morgan, L.D.S., D.D.S. (Royal College of Dental Surgeons, Toronto, 1930), an exodontist, is a prolific contributor to the dental literature. In 1944 The Dental Digest published a series of three articles by Doctor Morgan on Oral Tumors of Dental Interest. His current article reports the unusual discovery of a fully formed tooth in a dermoid cyst.

Zoltan Nemeth, M.D., D.D.S., obtained his medical degree from the University of Science, Budapest, in 1910 and his dental degree from the University of Pennsylvania, Philadelphia, in 1927. His first contribution to the Digest concerns the application of the full denture onlay to a severe case of acromegaly encountered in his general dental practice.

Regular readers of the Digest and other dental literature need no introduction to Jerome M. Schweitzer, D.D.S. (New York College of Dentistry, 1918). Another of his generously illustrated case reports, Treatment Plan For A Difficult Immediate Denture Case, appears this month.

Copyright, 1946, Dental Digest, Inc. See page 534 for Subscription Data, etc. The magazine is mailed on the fifteenth of the month of issue.

Lower Denture Technique Using a Combination Casting of a Metal Alloy and Acrylic

W. E. WILSON, D.D.S., Springfield, Illinois

Fig. 1—(Left) Test die of stainless steel. (Right) Metal cast made from impression of test die.

Along with the numerous advantages of acrylics are certain disadvantages which dentists have found difficult or impossible to control. Doctor Wilson has developed a technique for using a metal alloy in conjunction with acrylic in lower dentures which overcomes the handicaps of this material.

SINCE THE introduction of acrylic for lower denture bases, dentists have been having difficulty controlling the three disadvantages of this material; namely:

1. Shrinkage when the mass is polymerized.
2. Dimensional change upon the absorption of moisture.
3. Volume lightness.

Metallurgy has advanced to such an

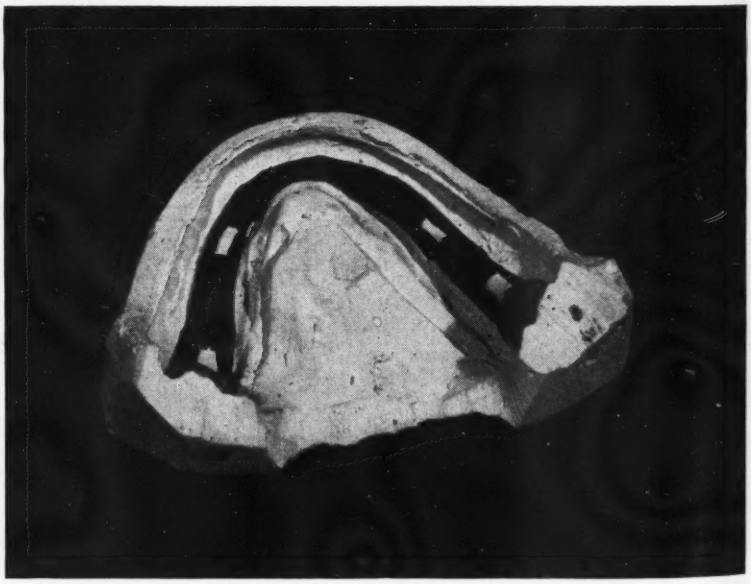


Fig. 2—Model with 22-gauge wax layout on ridge with four cutouts for bearing points.

extent in recent years that a formula has been developed to aid in overcoming these handicaps. To be desirable, a metal alloy should fulfill the following requirements:

1. Provide complete control of dimensional changes in casting.
2. Permit a simplified technique that will reduce cost and labor.
3. Supply sufficient rigidity to hold its shape when molded with acrylic.
4. Allow rebasing to be performed easily.
5. Be easily adjustable in tissue-bearing cases.
6. Accommodate dentures of any required thickness, size, and weight.

Testing Metal

In testing the metal utilized in the technique presented here a stainless steel die measuring 0.8846 inch was made with two parallel planes (Fig. 1). An impression of the die was taken and a model was made. This was flasked and cast by the same technique as that explained subsequently in this article. When the casting was removed, its micrometric measurement was almost exactly the same as the steel die, being 0.8845 and indicating a shrinkage of 1/10,000 of an inch (Fig. 1).

Fig. 3—Large impression tray with beeswax around edges for compression.

To test the performance of acrylic

Fig. 4—Alginate in tray preparatory to taking impression.

alone, the steel die was tinfoiled and an impression was taken with die stone and molded as in denture construction. A shrinkage of 1/100 of an inch was found in the acrylic.

Technique

The desirability of incorporating the metal in the lower denture having been established, the following technique has been developed:

1. A lower impression is poured in die stone and an outline the size of the desired casting is made on the cast with pencil. Twenty-two gauge wax is placed over the model and cut according to the outline of the casting (Fig. 2). Four pieces of wax are cut out so that when the impression is taken, bearing points will be produced and transferred to the casting when this is made. (When mucostatic or tissue-bearing cases are to be used, the 22-gauge wax is not placed over the model as in Figure 2.)

2. A large aluminum tray is selected to fit over the whole die stone

Fig. 5—Alginate impression.

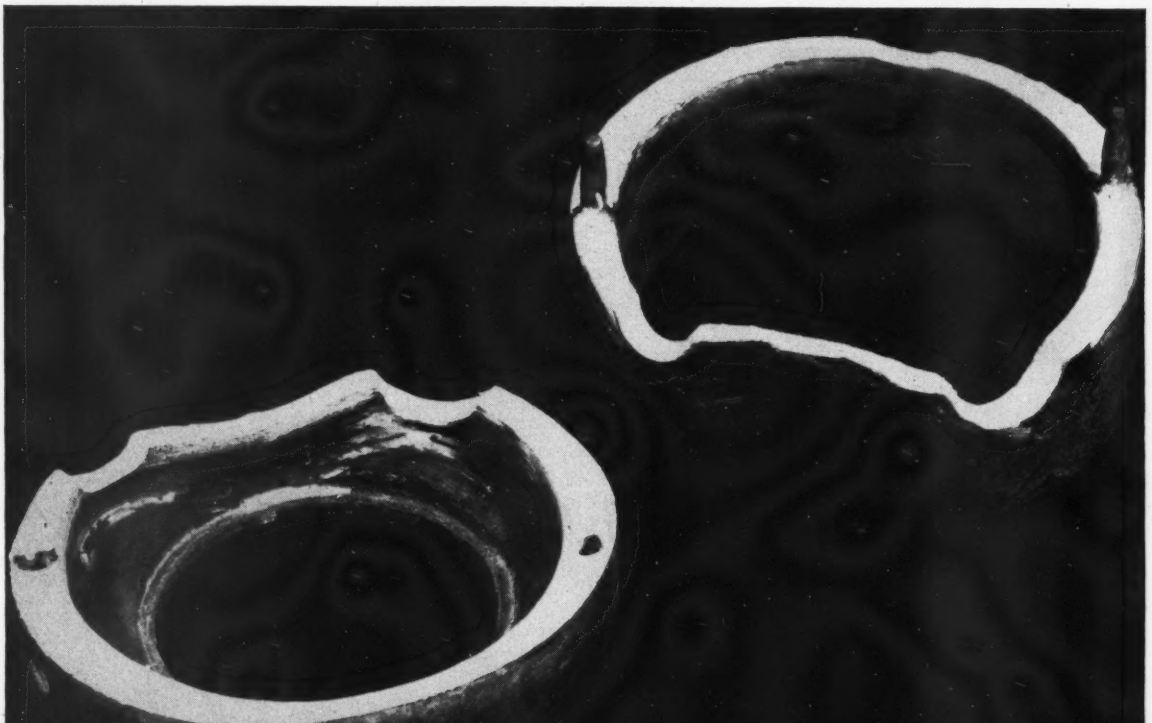


Fig. 6—Flask with notches on both upper and lower half forming gate through which to pour metal and a riser vent on opposite side.

model. Beeswax is placed around the edge of the tray. The tray is placed over the model while the wax is still soft so that a compression will be formed when the impression of the model is taken (Fig. 3).

3. Alginate is mixed and placed in the tray for the impression of the model (Figs. 4 and 5).

4. The impression is poured in a casting investment. The outline of the size will be a raised area. A piece of pink wax is placed over the model and cut to the size of this raised area. The wax can be roughened up. If thin castings are to be made, one or more 22-gauge waxes can be used, instead of regular pink baseplate wax. The casting made by this procedure will not be tissue-bearing but will act as an internal reinforcement metal insert. There will be a sufficient space between the casting and the ridge area to accommodate the acrylic base.

5. Investing and Flasking.

a) A flask is made out of a large vulcanite flask. Two notches are cut in the top and two in the bottom of the flask, one set to serve as a riser vent, the other as a gate (Fig. 6). Two pieces of wax are rolled and placed at the end of the waxed up model for the sprue and risers (Fig. 7).

b) The case is now ready for flasking. The model is tried in the flask to see that the pieces of wax for the riser and the gate are properly placed when the case is poured (Fig. 8). A large mix of casting investment is made. A small amount is poured into the lower flask and the model is set into it, care being taken to assure that the gate and riser are in their proper places. The upper half of the flask is placed and the pouring of the case is completed. (Note: It is not necessary to open the flask; therefore the split-half technique can be eliminated, as the wax is burnt out instead of being boiled out and cleaned.)

c) The flask is placed on a Bunsen burner and well heated to burn out the gases. A slow, low flame will burn these out faster than a fast, hot one. The metal for casting is placed in a ladle and heated over a Bunsen burner. It is poured into the gate until it emerges at the riser part of the flask (Fig. 9). If there is any doubt about gas pockets, tap the flask. Before it is removed, the flask is set aside to cool to room temperature (Fig. 10).

Fig. 7—Pink wax on casting model with sprue for gate and one for riser.

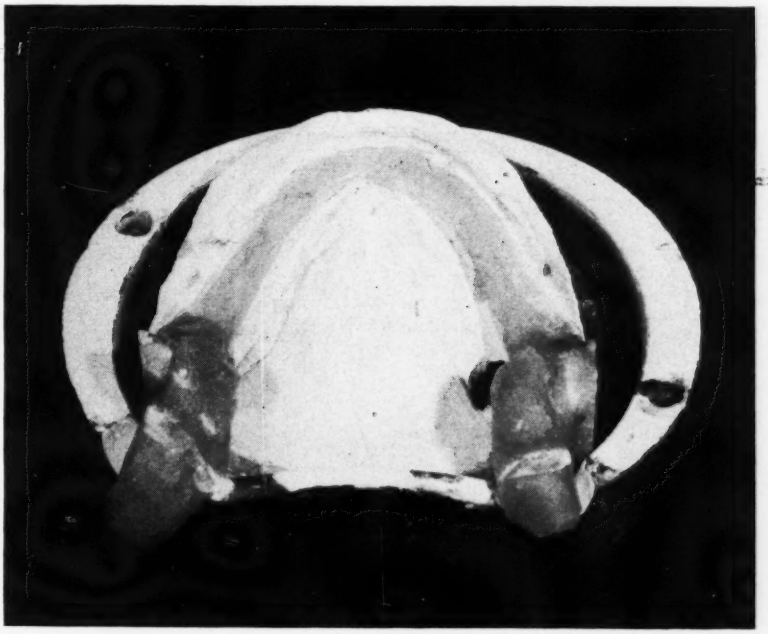


Fig. 8—Casting model in notches on flask to test position of gate and riser. This testing is done before final pouring.

d) The sprue and gate are cut off, and the casting is trimmed and adapted to the original die stone model. *The casting is not polished.* If there is any doubt about the tooth room in the setup, the casting can be used as a trial baseplate. In this case, the metal must be cleaned with hot water and chloroform, after the try-in of the setup in the mouth and before packing the acrylic.

6. Packing and Flasking the Acrylic. The recently developed block-out

Fig. 9—Pouring metal into gate of heated flask.

Fig. 10—Casting removed from flask. The case will not have to be cleaned.

Fig. 11—Painting block-out over casting.

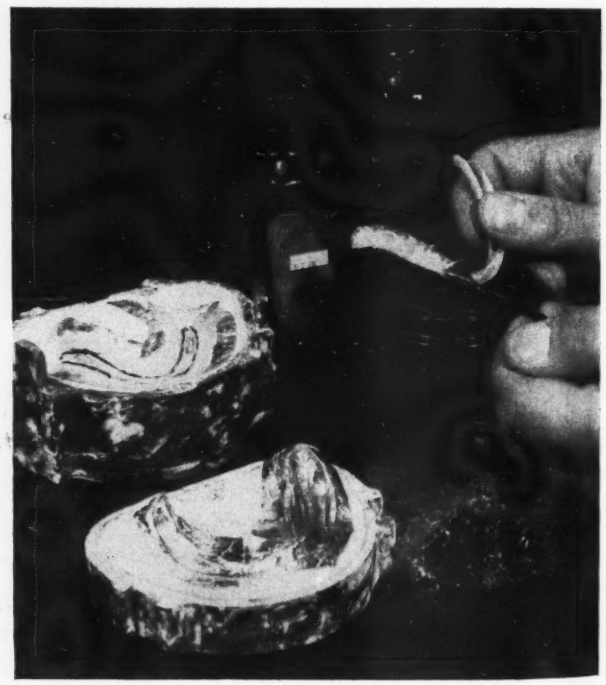


Fig. 12—Placing soft acrylic on casting before placement over ridge preparatory to final closing of case.

material can be used over the metal base, if desired (Fig. 11). The case is flasked and packed by the same method that is generally used in processing a denture without a metal base.

a) The trial pack is made and the metal base placed over tinfoil ridge.

b) A piece of wet cellophane is placed over the metal and the case is

Fig. 13—Practical tissue-bearing case. Acrylic anterior teeth for tongue tip room; lingual roll for tongue floor.

trial-packed again. When it is opened, it will be found that the cellophane protects the metal from sticking to the acrylic.

c) The metal is removed from the ridge and cleaned, preparatory to the final closure of the flask.

d) At this point, some soft acrylic is placed over the ridge side of the metal casting and pressed over the ridge.

e) The case is finally closed (Fig. 12) and the polymerizing done in the usual manner.

Consideration of Design

Two factors should be considered in the design of a lower denture using a metal base:

1. Tongue tip room. In closed bite cases, acrylic anterior teeth can be used. In open bite cases, long-pin porcelain teeth or pinless porcelain teeth may be found desirable (Fig. 13).

2. A roll should be designed on the lingual of the denture starting at the median line, gradually enlarging to the mucolingual fold in the cuspid region, then enlarging to the anterior of the second molar, and slightly tapering over the mylohyoid ridge (Fig. 13). This design should be used to help stabilize the denture as the tongue will have a natural floor to lie upon.

Through experience with various sizes and shapes, the dentist will find that the tongue can be of great aid in stabilizing the lower denture.

504 *Myers Building*

Specific Infections of the Hand in Dental Surgeons: Notes on Three Cases

Professor H. F. HUMPHREYS, L.D.S.

The practice of dental surgery is a more dangerous vocation than the public supposes. The following cases illustrate this. All occurred among the past or present staff of the Birmingham Dental Hospital in the five years, 1933-37; all were originally diagnosed as simple non-specific infections; and as a result of this diagnosis, all developed secondary sequelae.

Case 1.—Infection with Spirochaeta Pallida

In July 1933, a dental surgeon was troubled with a small pimple at the edge of the nail of the left thumb. It increased in size despite dressings and part of the nail was removed; but the pain and inflammation persisted and the glands enlarged in the axilla. After two weeks he was admitted to a hospital, the whole of the nail was removed, and continuous fomentations were applied for a week. Healing commenced but was still incomplete when, three weeks later (in September), skin rashes appeared; the Wassermann reaction was found to be strongly positive, and anti-syphilitic treatment was begun. In two weeks all physical signs subsided but anti-syphilitic treatment was continued for the usual two years. The Wassermann reaction has been negative each year since then.

Case 2.—Infection with the Bacillus of Diphtheria

On April 14, 1937, the tip of the index finger of a dental surgeon's right hand became painful and swollen. On April 15 it was opened under nitrous oxide; no pus was found. By the 21st the wound had healed sufficiently to permit work. On April 23 the finger received an injury, the temperature rose to 102° F., and the finger became painful and swollen. The nail was removed under general anesthesia, the finger opened, and a swab taken. No pus was found but after three days a second swab was taken and a diagnosis of diphtheria made from the culture on the 30th.

On May 1 16,000 units of anti-diphtheritic serum were given; on May 13 another 16,000 units; and on June 1 16,000 units more. But despite these measures, the index finger remained inflamed. On July 1 numbness of the hand and of the feet was complained of and on July 14 peripheral neuritis was diagnosed. On July 21 the necrotic tip of the finger sloughed. On August 1 hypodermic injections of

(*Continued on page* 574)

Unusual Case of Dental Interest: A Dermoid Cyst

GEORGE A. MORGAN, D.D.S.
Toronto

Dental literature contains few, if any, instances in which fully formed teeth are observed in dermoid cysts. To Doctor Morgan's knowledge, the tooth pictured here is the first such structure that has been x-rayed to determine the proportions of enamel, dentine, cementum, and root canal structure.

Dermoid Cysts

Dermoid cysts have been defined as those cysts containing tissues or appendages derived from the epiblast. The most commonly found contents are: hair, skin, teeth, and occasionally teratoid remains. These cysts are congenital in origin and chiefly ovarian in location.

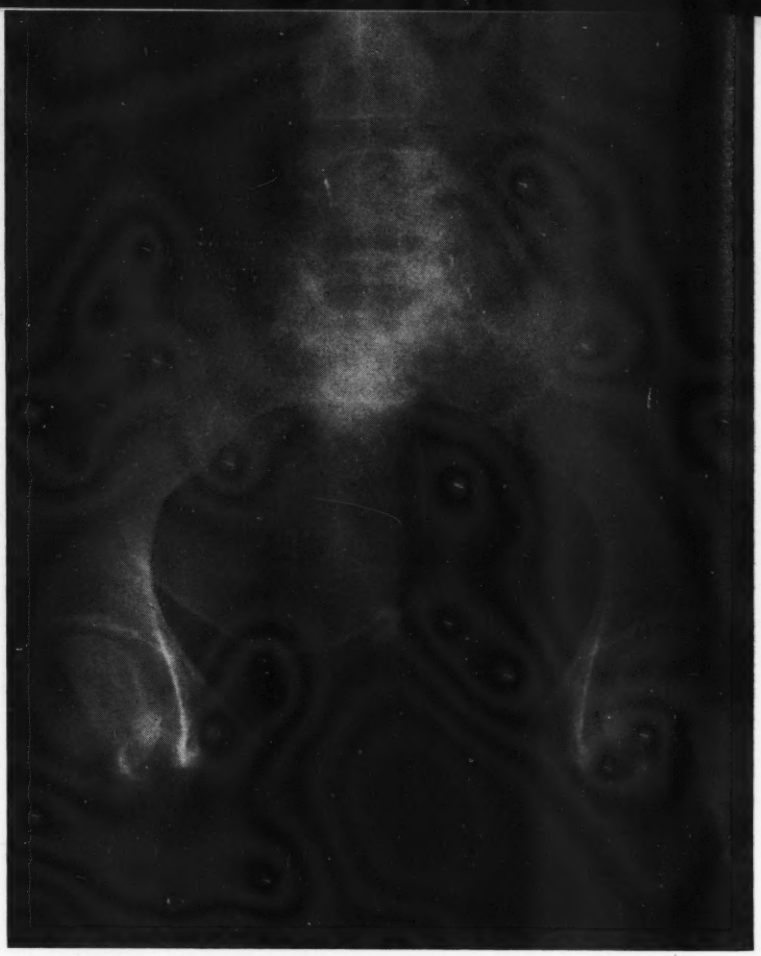


Fig. 1—X-ray of pelvic cavity illustrating full term foetus obstructed by a large dermoid cyst containing tooth structure.

Fig. 3—Photograph of cuspid-shaped tooth removed from dermoid cyst.

Fig. 2—Photograph of tooth structures removed from dermoid cyst.

Fig. 4—Photograph of x-ray of tooth as illustrated in Figure 3.

Case History

A white female, aged 30, pregnant full term, presented herself at the hospital because of abdominal pain. X-ray examination revealed a normal size foetus, the delivery of which was obstructed by a large dermoid cyst containing masses of tooth structure and investing bone (Fig. 1). Caesarean section was successfully accomplished and the dermoid cyst and the foetus were removed.

The number and amount of tooth structures present in the cyst (Fig. 2) were of dental interest. One particularly interesting mass of tooth structure simulated in appearance a cuspid tooth, complete with investing bone structure (Fig. 3). X-ray examination revealed the fact that this cuspid-shaped tooth contained approximately the normal proportions of tooth structure together with investing bone (Fig. 4).

170 *St. George Street*

Uses of the Study Cast

CHESTER PERRY, D.D.S. and STEPHEN G. APPLEGATE, D.D.S., Detroit

Determining Inter-arch Space

IN TREATMENT planning it is important to occlude study casts to determine the inter-arch space available for a restoration. When inter-arch relationship is checked by articulating models of the opposing dental arches, it may be found (1) that there is inadequate space available for the restoration of lost dentition, or (2) that there is no room to insert occlusal rests or indirect retainers without some alteration.

Detecting Excessive Lingual Tipping

The study cast enables the dentist to determine whether teeth in the arch are tipped so far lingually that some compensation must be made in order to prevent serious trouble when the restoration is inserted.

Choosing Abutment Teeth

The contour of possible abutment teeth in relation to a definite line of insertion may also be studied. Often, by changing the line of insertion by tipping the study cast on the surveyor, retention on a particular tooth may be achieved where apparently none had previously existed. Thus the most desirable retentive bearing point for the clasps is found by altering the line of insertion.

There may be an undercut in the soft tissue in an area which has to be crossed to reach the chosen retentive area of the abutment tooth. This must be discovered since the clasp arm cannot be lowered below the contour of the mucosa in such an area. Also, tissue undercuts and irregularities produced by various tori in the mouth should be considered in a thorough examination of the study cast. By looking at the teeth in the study cast, lingually, the dentist can tell whether there has been a vertical closure and whether ample space exists for occlusal or incisal rests.

Demonstrating for Patient

The study cast, by visual observation, makes obvious even to a layman many of the conditions present and the need for restoring the mouth to functional and esthetic normalcy. The patient may be shown just how his dentition is to be restored; and if he is concerned with the conspicuousness of the restoration in talking or smiling, the dentist can illustrate just where the clasps will be and just how much metal or base material will show.

Guiding Master Model Impression

The study cast helps in the selection of a tray which will cover all essential areas in the impression for the master model. This cast has been used to locate essential areas for the partial denture; therefore, if a void, a tear, or other inaccuracy occurs in the impression taken for the master model, it will be known at once if that inaccuracy is in an essential area and whether or not another impression should be made.

Establishing Permanent Record

The study cast is a permanent record of the conditions existing before corrective procedures were brought about. It may be the only remaining visual evidence of conditions existing in the mouth prior to the surgical and operative procedures which were necessary for the construction of the partial denture. It can be a mute partner in answering questions that the patient may raise regarding the justification for the procedures.

—From *Journal of the Michigan State Dental Society* 28:82-84 (April) 1946.

The Full Denture Onlay in a Case of Acromegaly

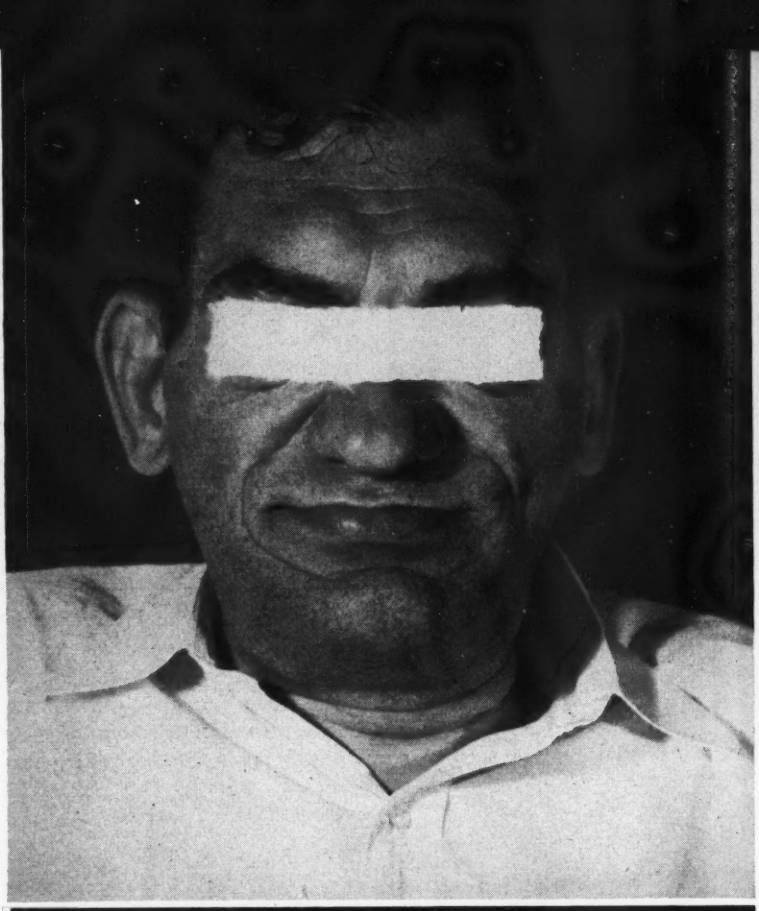
ZOLTAN NEMETH, M.D., D.D.S.
New Brunswick, New Jersey

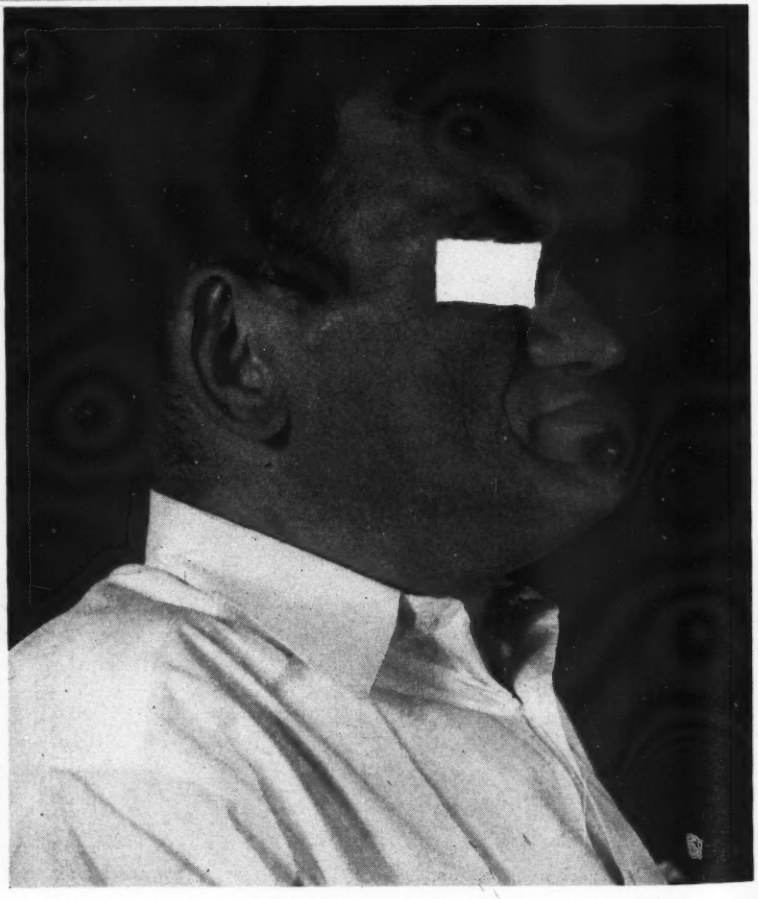
The progressive enlargement and protrusion of the mandible in acromegaly impairs mastication seriously by preventing articulation. A dental procedure planned to restore some of the masticating efficiency in a patient suffering from an advanced case of acromegaly is stated by Doctor Nemeth.

ACROMEGALY IS a chronic disease caused by hyperactivity of the pituitary gland which produces the growth hormone. The early symptoms are: vague pains, commonly ascribed to rheumatism, and a gradual enlargement of the hands, feet, and face. In the course of time the appearance becomes characteristic: The supraorbital arches and cheekbones are prominent; the nose is broad and long; the facial tissues are thickened; the lower jaw is greatly enlarged, and the teeth are separated. The tongue often grows to such an extent that it interferes with the articulation of the teeth. In general, there is a loss of sexual power and desire, muscular weakness, and mental depression.

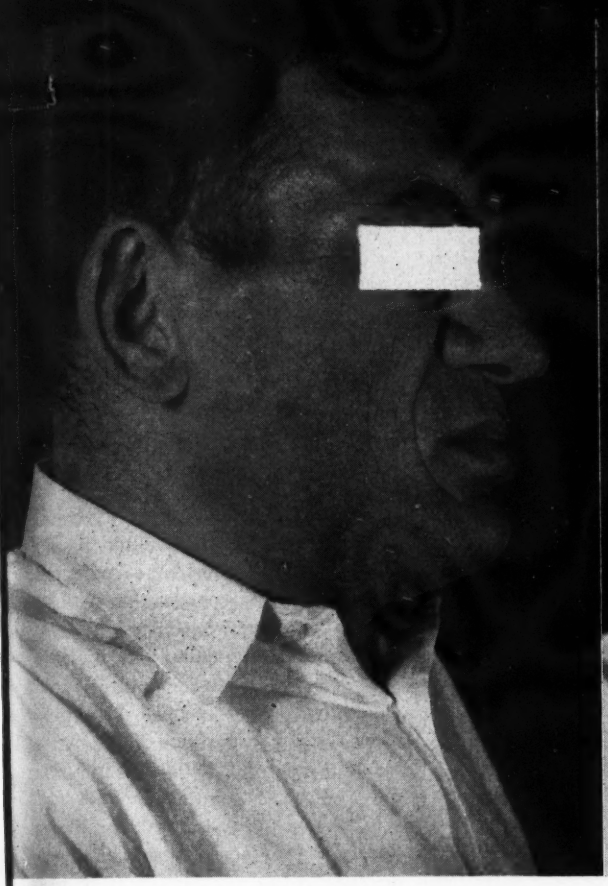
Condition of Mouth

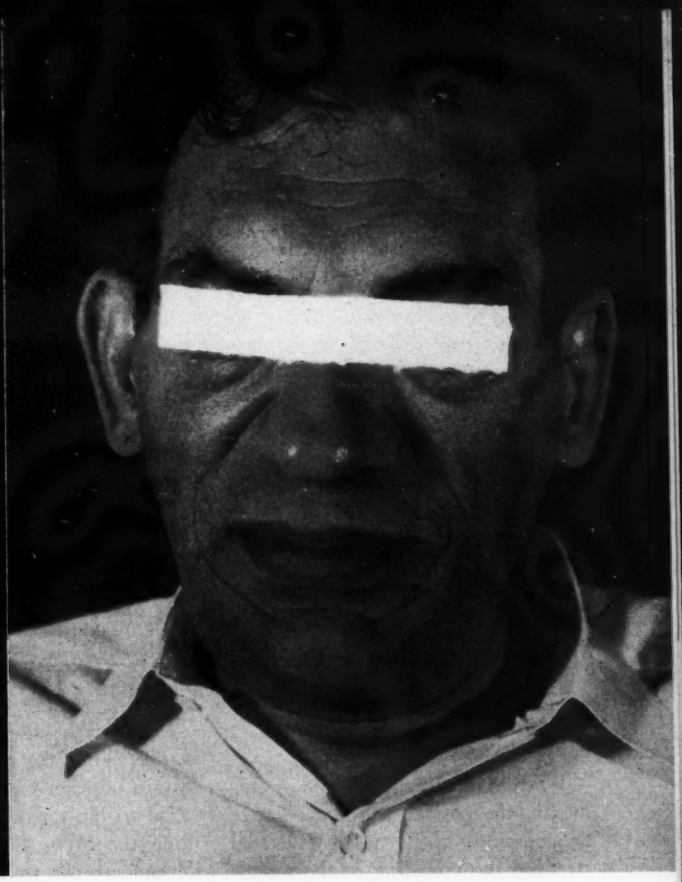
In the case of a male patient, aged 44, the enlargement of the mandible was sufficient to prevent any articulation. Mastication was impossible. The soft tissues on the palate were very thick and soft, and the tongue was exceptionally large. There was an unusually free flow of saliva. The gums were firm and of good color. On closing the jaw, the lower teeth were in protrusion about three-eighths of an





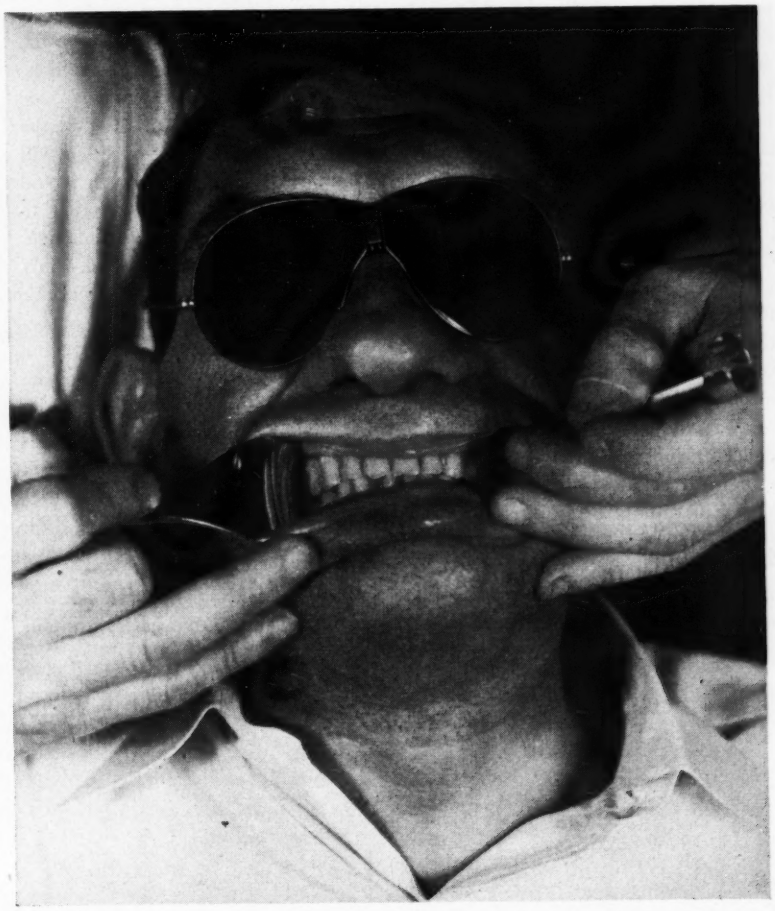
Figs. 1 (*top*) *and* 2—*Anterior and profile views before construction of denture.*





Figs. 3 (left) and 4—Anterior and profile views after denture construction.

Fig. 5—The upper denture articulates comfortably with the natural lower teeth.



inch in the anterior region and somewhat less posteriorly (Figs. 1 and 2).

All upper teeth were present except the left first molar, the right first bicuspid, and the right lateral incisor. All lower left molars and the second and third right molars were missing; there were also large interspaces between the teeth in the lower jaw.

Construction of Denture

It was decided to make a full denture "onlay" and bring the denture teeth in articulation with the natural lowers. This would place the burden of mastication upon the natural teeth. It was also thought that covering the whole palate would aid in retention and hygiene.

1. An impression of the upper jaw was taken in colloid and casts were made in stone.

2. After the bite was taken, the casts were mounted on the articulator and the denture teeth were set up labially to the natural incisors, over and buccally to the natural teeth in

the posterior region, and in articulation with the natural lowers.

3. The case was tried to check articulation, comfort with regard to opening of the bite, and esthetics.

4. Acrylic teeth were used and the case was completed in methyl methacrylate. The fitting of the denture was a tedious procedure.

Comments

The effects of the denture were pleasing in every respect (Figs. 3, 4, and 5). Speech and facial expression improved; mastication became satisfactory. It is to be noted that further progress of the malady might necessitate readjustment of the teeth after a period of time.

46 *Bayard Street*

Instructions for Prosthetic Patients

Commander FRANK E. JEFFREYS (DC) USN, Norfolk, Virginia

DENTURES may fail simply because patients are not given sufficient advice as to: (1) what to expect from their dentures, (2) the best way to adjust to them, and (3) how to care for them. The following facts and suggestions will help prosthetic patients.

Feel

When a denture is placed in his mouth, the patient will immediately be conscious of its bulk. Its actual size and the crowding of the tongue will seem exaggerated because the tongue is accustomed to the additional room present in the mouth resulting from the loss of the natural teeth. The lips may seem strained and full due to the border of the denture under them. This awkward feeling will disappear as soon as the lips become accustomed to the denture being there.

Appearance

The appearance changes due to the loss of the teeth: The lips sag a little, the cheeks become a bit hollow, and the chin moves a little closer to the nose. When these conditions are removed suddenly by the insertion of a denture, the appearance may seem unnatural at first; but this impression will rapidly disappear.

Speaking

Some difficulty may be expected in speaking. Mastering this is simply a matter of practice. An hour or two spent in reading a book or paper aloud will help. The patient should enunciate each word slowly and clearly. Soon he will be talking as distinctly as before.

Eating

Eating is a little more difficult to master. While the upper denture will stay in position regardless of the position of the tongue, success in handling the lower denture is entirely dependent upon tongue position. The tongue should be kept level with the top of the lower teeth at all times. It should never be allowed to lie on the floor of the mouth. Its tip should be held lightly against the inner surface of the lower front teeth. If the tongue is not kept in this position, food will get under it and also between it and the denture. Then, in attempting to push the food back between the teeth, the denture may be loosened. Only small bites and soft foods should be taken at first. After the patient becomes thoroughly accustomed to the denture, bites of normal size may be handled. He should not expect to be able to eat with a denture immediately. If he can expertly handle all ordinary foods at the end of the first month, he is doing exceptionally well.

Care of Denture

The prosthetic patient should remove his denture after each meal and rinse it thoroughly, using a brush on his teeth and the area around them. He should not scrub the bearing surface, i.e., the surface which fits against the tissues of the jaw. Scrubbing this surface would eventually wear it away and affect the fit of the denture.

Although many people prefer to wear a denture day and night, it is recommended that the denture be removed at night to give the mouth tissues a chance to rest and regain their normal tone. When this is done, or at *any* time when the denture is to remain out of the mouth, it should be kept in a glass of water to which a little salt, soda, or mouthwash has been added.

Adjustment of Denture

A day or two after insertion of a denture and from time to time thereafter, sore spots may develop in the mouth. Likewise, if there are any clasps on the denture, they may loosen and require tightening. When either of these conditions arises, instruct the patient to consult you, never to correct or adjust his denture himself.

The successful wearing of a denture depends considerably on the patient's cooperation. If he makes an honest effort, he will quickly master the wearing of a denture.

—From *United States Naval Medical Bulletin* 46:1116-1117 (July) 1946.

The Editor's Page

MANY DENTISTS and physicians never attend any professional meetings except, perhaps, those of their local societies. Every editor knows to his chagrin that the periodical technical literature is not read either regularly or to any great extent. Book publishers count the sale of medical and dental books in the lower thousands. The sale of 5,000 copies of such books is considered spectacular.

These sorry facts should not be interpreted to mean that professional people are resistant to new information. Quite the contrary: New methods and procedures for treating disease are readily accepted, provided the means of spreading the information are not too cumbersome. Weariness and inertia are common to everyone. To overcome these baneful forces, it is necessary to present scientific information in as simple and attractive a fashion as possible. Radio and television offer important possibilities for informing dentists and physicians. One radio program, "The Doctors Talk It Over," sponsored by an important pharmaceutical manufacturing laboratory, is an example of carrying valuable information to the medical and allied professions. The speakers on this program are distinguished in their fields. The program is the interview type.

Recently, the eminent surgeon, Vilray P. Blair, spoke on cancer of the mouth. Here are highlights from the radio speech:

Incidence: Fifteen to twenty men are attacked to one woman.

Tobacco: In Ireland and India the women smoke more than the men, yet the ratio is: men, 15-20; women, 1.

Biopsy: A properly done biopsy in itself gives little room for error. A competent pathologist renders an opinion solely on the tissue examined and usually states merely that the biopsy "shows cancer" or "does not show cancer." Occasionally, however, different interpretations may be given by different pathologists on sections from the same specimen. By a competent micropathologist a positive diagnosis of cancer is absolute. A negative report does not exclude the possibility of cancer. It is quite possible that a malignancy may be present, protected by a dense wall of innocent swelling; but it may have been a section of this protective wall that was provided for biopsy examination. Or, an inflammatory infiltration may mask the true cancer cells. In any case, the alert surgeon will be slow to accept a dissenting microscopic opinion on a questionable lesion. He will take other specimens and his final judgment may be determined by the clinical progress of the lesion.

Size: Mere size of a cancer means nothing, but the direction of growth is highly significant. A definite protrusion from a flat base rarely indicates malignancy; but the absence of this feature puts the cancer in the fatal class unless clinical or microscopic evidence proves otherwise.

Cancer of the Tongue: For the local treatment of the tongue cancer we now rely on implantation of radon emanations in gold seeds. With heavy dosage, an opposing non-involved surface is protected with a lead and rubber-fitted shield held in place by sutures or wired to the teeth.

Cancer of the Cheek: Malignancy here has averaged extremely resistant to radiation. The Bloodgood procedure is usually accepted as the treatment of choice. This calls for meticulous knife dissection in at least the upper neck and submaxillary area, cautery excision of the cheek area, and heat devitalization of the related bone. If the floor, lip, tongue, or fauces is also involved, there radon seeds are inserted in addition to the cauterization.

Cancer of the Lip: Radon implantations are preferred for limited lip involvement. However, for larger areas, cautery destruction and subsequent repair might be indicated. The surgeon knows that microscopic grading of lip cancer does not give a true estimate of virulence as compared with tongue or cheek cancer; grade for grade, the lip growth is the milder. The majority of lip cancers infect the lymph glands only in the late stages, but we have seen the gland invasion develop as long as seven years after the destruction of the still cured lip growth.

When lip cancer is present without palpable evidence of lymph gland involvement, the patient is usually given the choice of concurrent upper neck dissection or subsequent interval examinations. The first procedure is probably the safest and best. In all other squamous cancers of the mouth area related cervical gland areas are eliminated whenever practical.

Outlook: Some thirty-three years ago, Butlin analyzed a large series of personally treated cases of combined tongue and gland removal with thirty-seven per cent survival for periods of from three to twenty-three years. In the subsequent indiscriminate surgery-radiation tryout period, the showing was not as good. Now, with greater opportunity to treat the malignancies in pre-, early or moderately advanced stages; with radiation substituting for tongue mutilations; early routine mass gland removal; and better controlled anesthesia, we should be able to offer the average mouth cancer victim much greater promise.

Treatment Plan for a Difficult Immediate Denture Case

JEROME M. SCHWEITZER, D.D.S., New York City

Whether for full or immediate dentures, in order to correlate incisal guidance, condylar inclination, occlusal curve and cusp inclines, it is necessary to build upper and lower restorations at the same time instead of completing one arch at a time.

In immediate dentures, even though the occlusion can be corrected by modifying the original occlusion, the facial characteristics should be preserved. Cross bite cases are usually problem cases. The least possible compromise, consistent with the fundamental principals of occlusion, should be effected.

A MAN aged 38 years presented himself for treatment. His teeth were infected, broken down, and unsightly; occlusion was poor (Fig. 1).

Roentgenograms, photographs, and study models were made. The models indicated an extremely high palatal dome, a narrow upper arch, and a sharp curve of Spee. Extraction of all upper teeth and the lower right and

Fig. 1—Anterior view of teeth when patient came for treatment. (Note vertical length of bite and faulty occlusion.)

Fig. 2—An upper immediate partial denture supplying all upper posterior teeth. It was completed on a duplicate upper model.

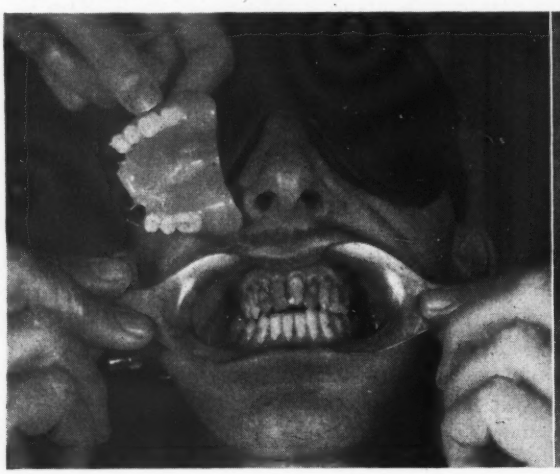


Fig. 3—Upper posterior teeth will now be extracted under local anesthesia and the partial denture inserted. (Note the long face and cross bite.)

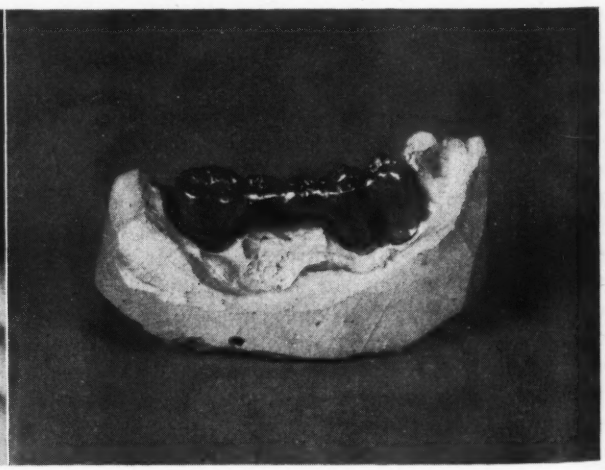


Fig. 4—Right temporary bridge of base metal used during the procedure.

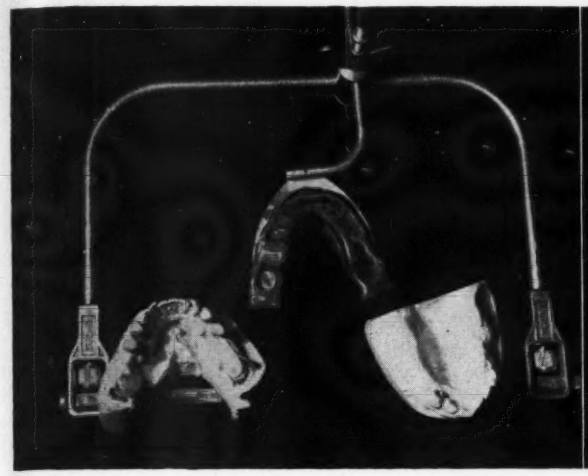


Fig. 5—Upper model taken after tissues had healed for five months. The six lower transfers can be seen in lower working model; these serve to position the copper-plated dies. Models are mounted on the articulator by means of face-bow records like the one shown plus a centric relation and protrusive wax bite.

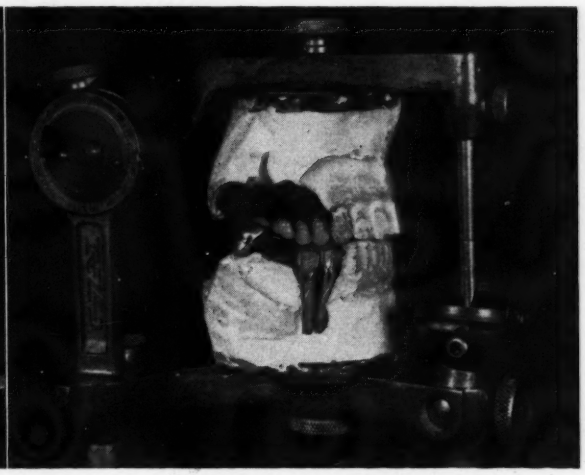


Fig. 6—The occlusal plane is first worked out in wax and then upper teeth and lower cast crowns are made to conform to this prefabricated plane which harmonizes with the patient's registrations.

left second molars was decided upon.

Treatment of Six Upper Posterior Teeth

A partial upper removable bridge was constructed of plastic material to supply the posterior teeth (Fig. 2). This was made by removing the stone teeth from an accurate upper model. Then the upper posterior teeth were extracted under local anesthesia and the partial denture immediately inserted (Fig. 3). The tissues were allowed to heal for five months during which time the lower teeth were treated.

Preliminary Treatment of Mandibular Bicuspids and Molars

A lingual bar was indicated to replace the lower posterior missing teeth but the patient was reluctant to have any form of removable appliances replace the mandibular teeth; therefore, it was decided to connect the lower third molars and the two bicuspids on each side by means of fixed bridges replacing one tooth on each side. Three abutments were used for greater strength.

Lower Right Posteriors—The lower right second molar was extracted; the lower right third molar and the two bicuspids were prepared under local anesthesia for full cast crowns of which those on the bicuspids were to receive acrylic facings. The preparations were made as parallel as possible but, owing to the tilt of the third molar, complete parallelism was impossible.

1. Copper-band modeling compound impressions were taken of the three preparations.

2. Copper-plated dies were constructed; temporary base metal crowns were prepared for the three teeth and inserted in the mouth.

Fig. 7—Cast crowns have been fitted and tried in the mouth and a new lower working model (third lower model) has been made. This is mounted on the articulator to replace the old working model. Lower bridges will be completed upon this model.

Fig. 8—New upper sectional modeling compound, muscle-trimmed impression with a wash of Plasto-gum. (Note the extremely high vault.)

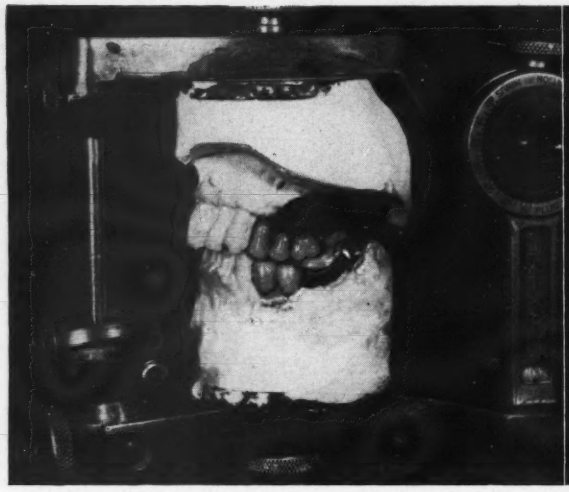


Fig. 9—Completed lower left bridge. Bicuspid and molar castings are all joined together; the pontic permits ease of cleaning.
Fig. 10—Occlusal view of completed lower fixed bridges. Gold occlusal struts prevent lowering of the bite caused by the acrylic material wearing too rapidly against the upper porcelain teeth. (Note the occlusal anatomy and narrow pontics.)

3. The occlusion was ground to the upper partial denture and a plaster impression taken with the three base metal crowns in position.

4. A bite was taken.

5. The base metal crowns were removed from the three lower right prepared teeth, placed in position in the plaster impression, and a lower model was poured.

6. On this model a pontic of base metal was constructed and soldered to the base metal crowns.

A small base metal bridge was made for the lower right side so that the patient could wear this bridge, secured by means of temporary cement, while the lower left quadrant was being prepared (Fig. 4).

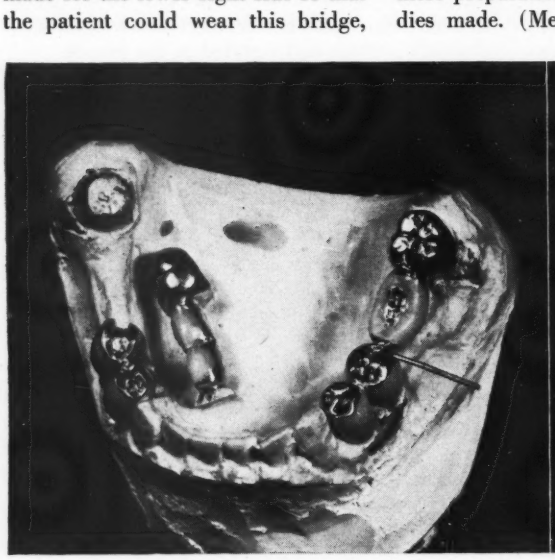
Lower Left Posteriors—The lower left second molar was now removed under local anesthesia and the lower left third molar and two bicuspids were prepared for full cast crowns. These preparations were made as parallel as possible. This was difficult, however, due to the severe tilt of the third molar.

1. Copper-band modeling compound impressions were taken of these preparations and copper-plated dies made. (Meanwhile, the patient was made comfortable by means of an aluminum crown placed upon the third molar and two celluloid crown forms with gutta-percha placed upon the two lower left bicuspids.)

2. Base metal transfers were made for the lower six posterior copper-plated dies. These were then placed upon their respective teeth in the mouth.

Second Upper Working Model

A full upper impression was taken in alginate material and a stone upper model (second upper model) poured. An accurate-fitting biteplate was



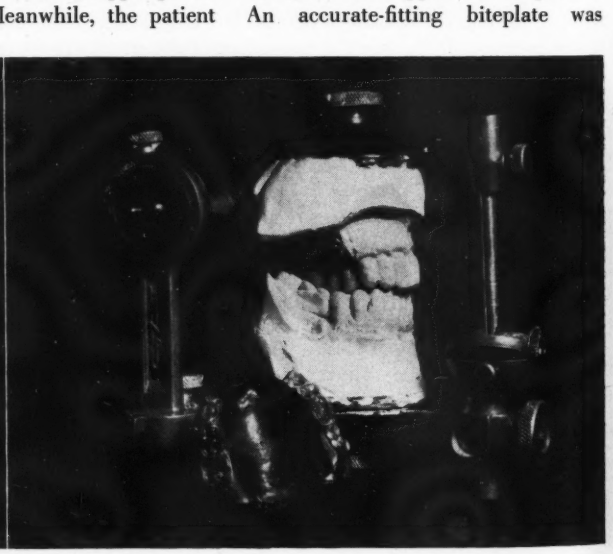


Fig. 11—The platinum iridium pin described in text is shown in position on left bridge. The right bridge has been disassembled to show the lug and lug seat with the hole drilled through to receive the pin. (Note counter sink in lug to prevent distal movement.)

Fig. 12—New lower model (fourth lower model) takes the place of old working model. Mounting has been done by means of new biteplate shown in foreground.

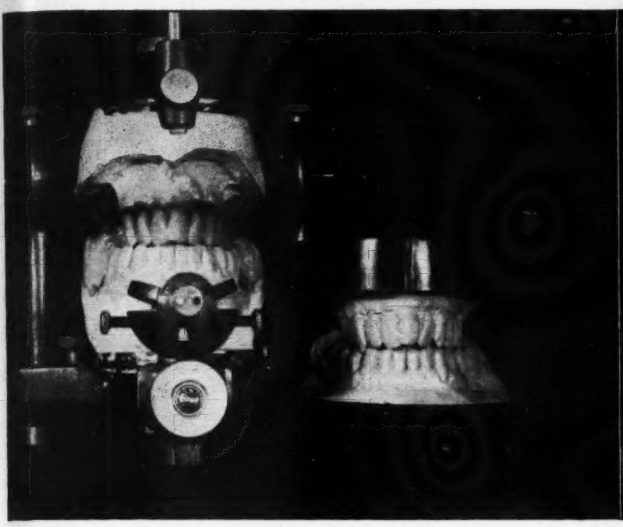


Fig. 13

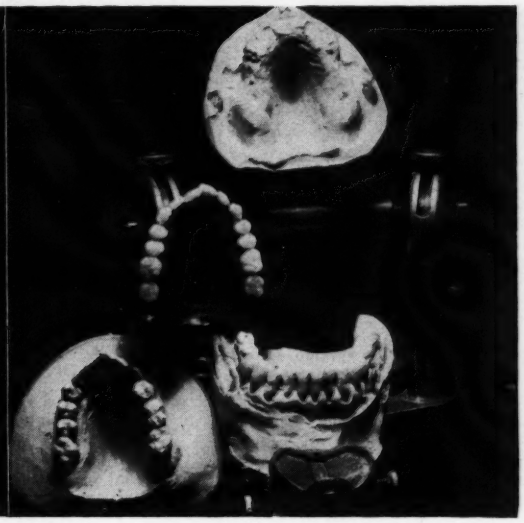


Fig. 14

made upon this by means of which a centric relation bite wax was taken directly in the mouth with the lower metal transfers in position. A face-bow record was made by means of which the upper model was mounted on the Hanau Model H. articulator. The upper biteplate was then placed in position in the mouth and a protrusive bite wax taken against the lower transfers.

Second Lower Working Model

1. A lower plaster impression was taken with the transfers in place.

2. The transfers were removed from their respective teeth and placed in the plaster impression.

3. The copper-plated dies were placed in their respective transfers.

4. A lower working model (second lower model) was poured and mounted to the upper working model by means of the centric relation wax.

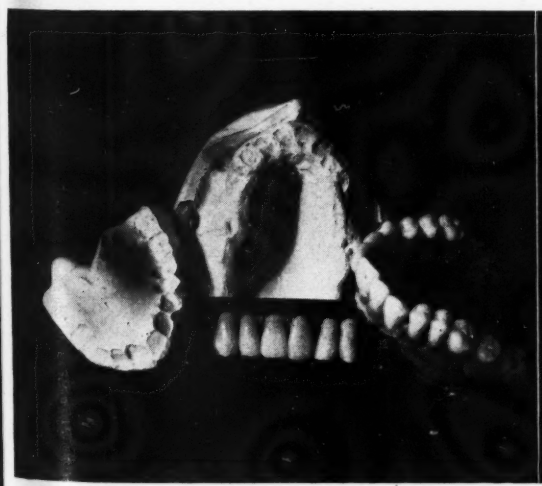
5. The condylar registrations were set upon the machine by means of the protrusive bite wax; the lateral registrations were computed by formula (Fig. 5).

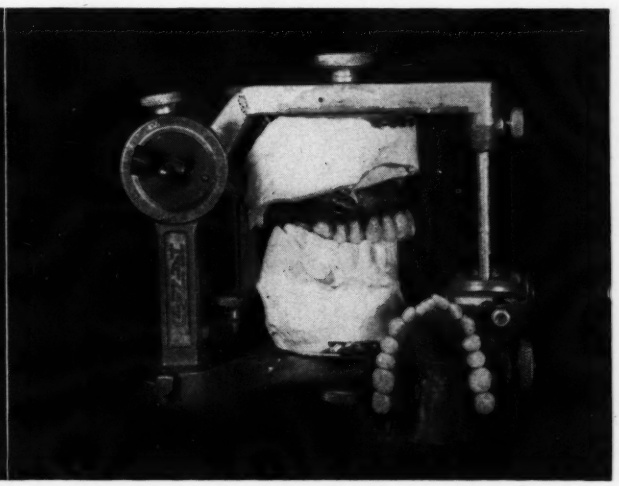
6. An occlusal curve was worked out, by means of the upper bite wax and wax added to the lower copper-plated dies, which harmonized with the movements of the articulator as registered by the patient.

7. The upper and lower occlusal curves were worked out in wax.

Completion of Lower Cast Crowns

The shade of the teeth and the mold of the upper posterior teeth were selected and the latter set up to the lower occlusal curve, the original upper model being used. Then the wax was removed from the lower copper-plated dies. The lower cast gold crowns were prepared to harmonize with the upper posterior teeth (and with the movement as registered by the articulator) (Fig. 6) and then completed and tried in the mouth one by one until they were all in position. Roentgenograms





Figs. 13, 14, 15, *and* 16—*The six upper anterior teeth have been removed from the model as described in the text. Two setups have been made. The teeth have been stained and the model scraped slightly. The duplicate setup is put aside and used later when the first denture needs rebasing. The original denture is used as a guide.*

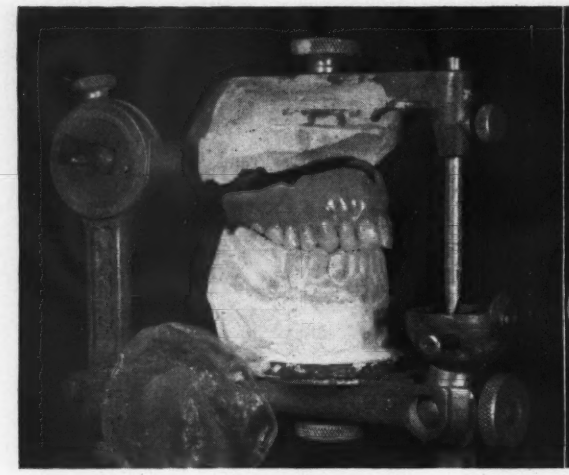


Fig. 17—Right view of completed upper denture. Before being polished, it was returned to the machine with its model and the occlusion rechecked. Then it was removed from its model and completed.

The clear acrylic operating matrix made from a duplicate upper model is shown in the foreground of Figure 17.
Fig. 18—Occlusal views of original upper model, first completed denture, and completed second setup.

were taken to check the cervical fit.

With the upper partial setup in position, a centric relation wax bite was taken directly in the mouth to check the occlusion and also to act as a future wax bite with which to set the new lower working model (second lower model) on the articulator for the two lower fixed bridges.

Third Lower Working Model

A full lower plaster impression was next taken. The cast crowns were removed from the mouth and placed in their respective positions in the full lower plaster impression. A working model (third lower model) was poured, half consisting of low-fusing metal and the remaining portion consisting of stone. The upper partial setup was taken from the mouth and placed back upon the upper model on the articulator. The lower working model was articulated to the upper partial setup by means of the centric relation wax bite previously taken (Fig. 7).

Completion of Lower Bridges

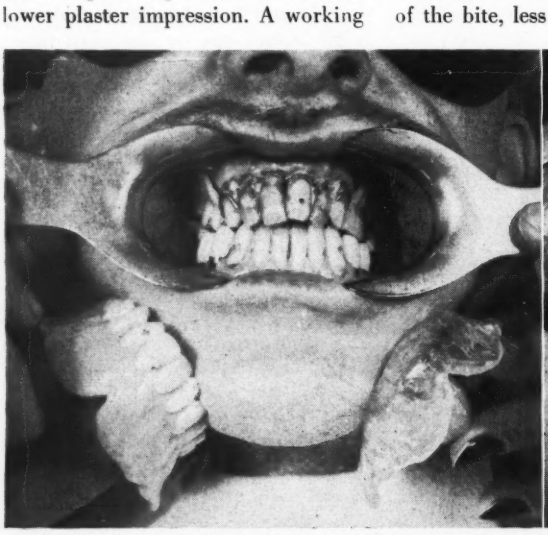
The hygienic type of lower bridges was made. (Owing to the great length of the bite, less food would accumulate beneath the saddle areas if the patient could clean these areas with his tongue.) The bridges were completed in the following fashion:

1. The first and second bicuspid crowns were soldered together.

2. A very deep lug seat was placed upon the distal of the right and left second bicuspid cast crowns.

3. A very deep lug was placed on the mesial of the cast pontic.

4. The lug and lug seat were made deep enough so that a pin running from the buccal surface could be drilled directly through the lug and lug seat.



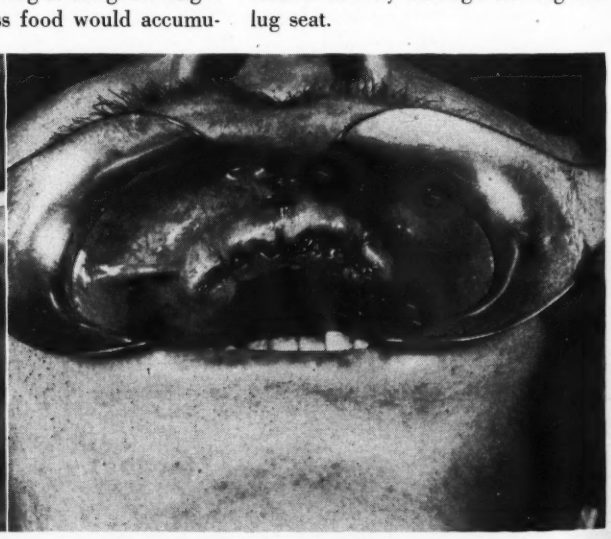


Fig. 19—Completed denture and acrylic operating matrix held alongside the chin just prior to removal of the six upper anterior teeth. The lower bridges may be seen in position.

The immediate upper partial denture described in the text and shown in Figures 2 and 3 is in position. Up to this time it has been worn for nearly six months, this interval permitting the upper tissues to heal before extraction of upper anterior teeth.
Fig. 20—After extraction, the edges of the gums are lightly sutured with black silk ligature; the lips of the wound are not pulled. Hardly any bone has been removed. Penicillin tablets have been used in the sockets. The denture is immediately inserted.

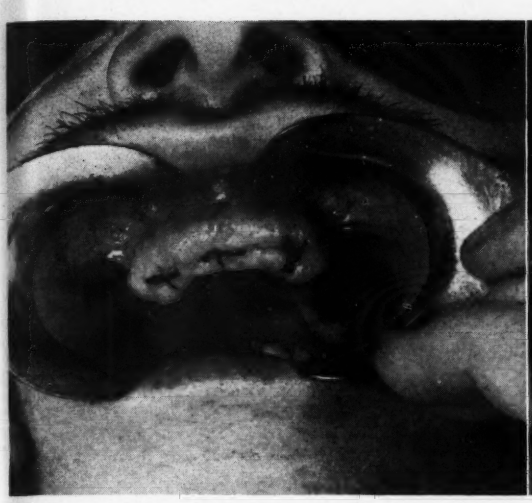


Fig. 21—Healing five days later. The sutures are now ready for removal.

Fig. 22—Nine days after operation.

5. When the pin was introduced from the buccal surface and cemented in position, the bridges were locked on both ends.

6. The lug seat was so arranged that it was also impossible to pull it from its seat in a distal direction.

These bridges were made in this manner because it was impossible, due to the position of the molar tooth, to make the three castings parallel; yet it was deemed advisable to make a one-piece bridge, soldered at both ends (due to the weakness of the molar tooth) rather than to make a broken-stress bridge. The constant leverage from a break-stress bridge would not be advisable in this case.

(While the bridges were being completed, a sectional modeling compound upper impression was taken. A Plasto-gum wash was taken in the sectional upper modeling compound impression and a model (third upper model) poured (Fig. 8).

Try-in and Bite-Taking with Bridges in Mouth

When the bridges were completed in the manner previously described, they were tried in the mouth before the plastic was added to the gold crowns.

1. With both bridges in position, a new biteplate was made on the new upper master model, a centric relation wax bite taken, and another face-bow registration made.

2. By means of this new face-bow registration, the new model was mounted upon the articulator, which took the place of the old upper working model.

3. The lower model was mounted to the new upper model by means of the centric relation wax.

4. The registrations were kept the same.

Now the upper partial setup was transferred from the old working model to the new working model and the lower bridges were completed (Figs. 9, 10, and 11).

Articulation of Models With Completed Bridges in Position

With the lower cemented bridges in position, a full lower impression was taken with alginate material and a lower stone working model (fourth

Figs. 23 and 24—Compare with Figure 1. The character of the face and the occlusion have been maintained.

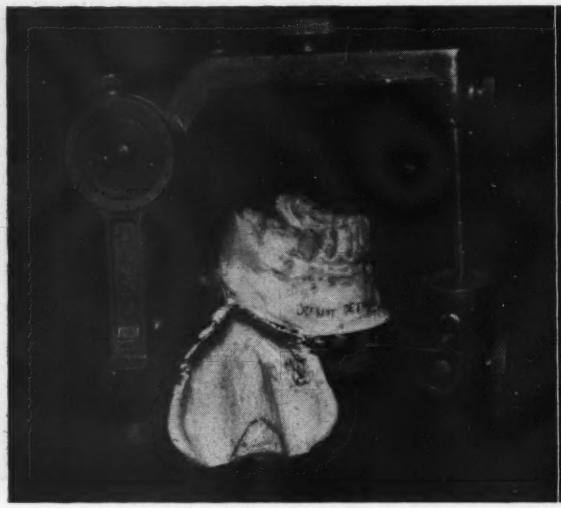


Fig. 25—The original lower model of the completed denture was not detached from its frame. Six months later it was placed on the articulator and the sagittal registrations were reset according to the previous records.

A new upper impression was taken by placing a wash of Plasto-gum in the second setup. This impression is shown in the foreground.

Fig. 26—The new upper impression is shown here. Its position was established by a centric relation wax taken in the mouth. Cusp contact was avoided.

lower model) was poured. The upper bite wax, which was previously used to position the new upper model, was again placed in the mouth, the undersurface evenly heated, and a centric relation bite taken. By means of the centric relation bite wax, the new lower working model was articulated to the upper model on the machine (Fig. 12).

Meanwhile, the old transitional partial denture was ground in the patient's mouth so that it was comfortable and articulated insofar as possible with the new lower bridges. All the grinding was done on the upper partial because the occlusal curve, which had been previously worked out on the articulator, could not be changed.

Grinding in of Anterior Teeth on Upper Model

The partial setup was placed in position on the upper model. The anterior teeth were now ground in:

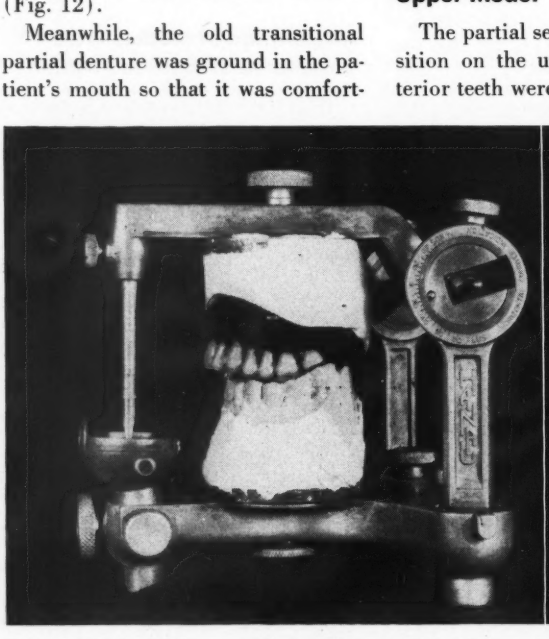
1. The alternate plaster teeth were removed.

2. As each alternate plaster tooth was removed, the porcelain tooth replacing it was ground in position to simulate the setup of the plaster teeth.

This procedure was followed until the six upper anterior teeth were ground into position.

Duplicate Set of Six Anterior Teeth

Nothing had been done up to now



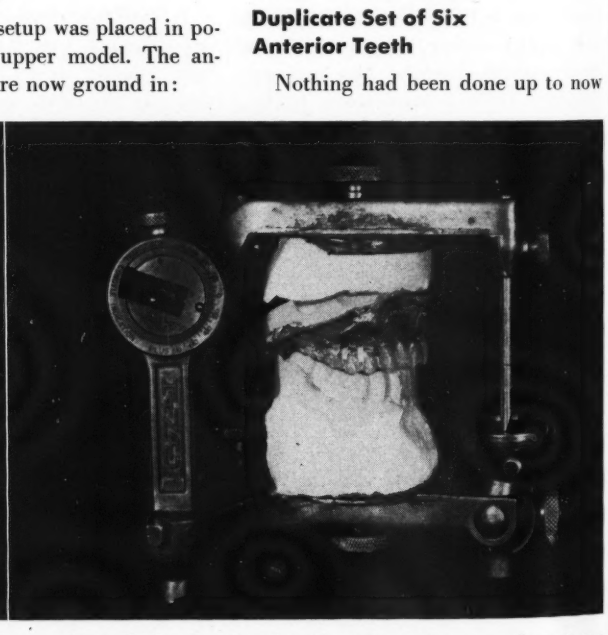


Fig. 27—A check bite was taken and a new lower impression made.

The new lower model was substituted for the old lower model to avoid inaccuracies where the stone had been rubbed.

The upper denture was reset and the teeth reground where necessary. The denture was now tried again in the mouth. When the occlusion was found to be correct, the upper denture was processed in acrylic material.

Fig. 28—After processing the model with the denture, it is placed back in its previous index on the articulator to check inaccuracies caused by processing. After correction, the upper denture will be completed.

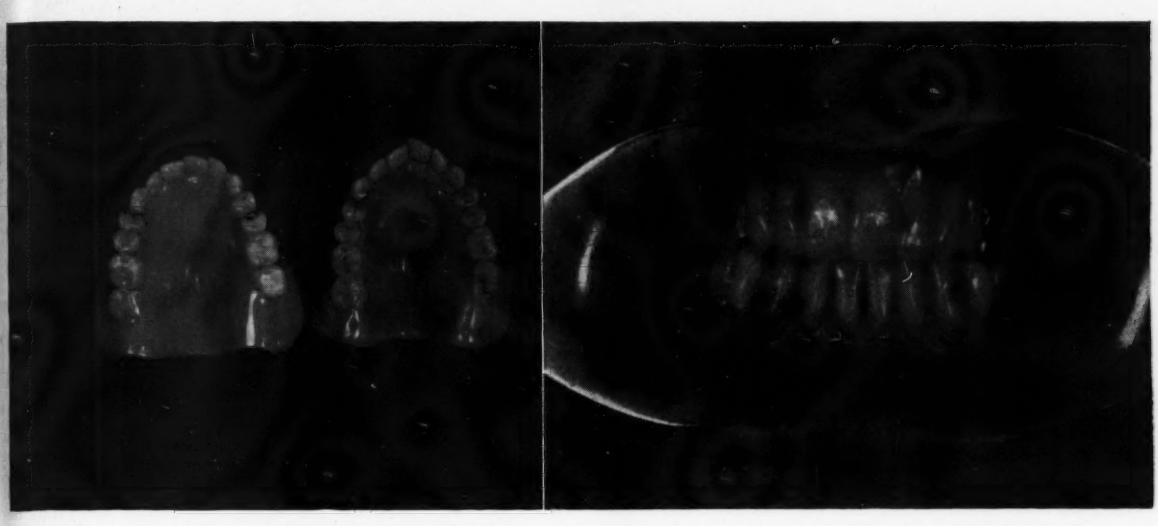


Fig. 29—The completed second denture is shown on left. The arch form is better than that in the first denture shown on the right; the staining is not as severe and the overbite is not as great as in the first denture. The change has been gradual.

Fig. 30—The second upper denture is shown in position in the mouth. The first denture will now be remade.

with the labial portion of the bone as represented by the stone on the model (Fig. 13). After the anterior six teeth had been ground in position, a palatal index was made. A duplicate set of six anterior teeth were also ground at this time by means of the palatal and labial index. This set was placed aside because it would be used at some future time to make a duplicate upper (Figs. 14, 15, and 16).

The twelve anterior teeth, namely, the duplicate 1x6 and the original 1x6, were now stained to simulate the patient's own teeth. They were not stained as badly as the patient's teeth had been; they were simply stained here and there to simulate the natural setup. (Staining and characterization of the teeth was done by Mrs. Jerome [Dorothy H.] Schweitzer.)

Flasking and Processing Upper Denture

The teeth were then returned to the model and the completed setup was further checked for balance in lateral and protrusive movements. The duplicate setup was laid aside for future use. The irregularities in the plaster, where the anterior teeth had been ground out, were now smoothed and the original setup returned. After the waxing was completed, the upper model was removed from its position on the upper frame in such a manner that it could be replaced to recheck the occlusion when the denture was processed. The upper denture was now flasked. When the flask was separated, a duplicate upper model was made.

A clear plastic base was made upon the duplicate upper model. This would be used in operating. The upper denture was then processed, replaced upon the articulator, and the occlusion rechecked after which it was removed from the model, finished, and polished (Figs. 17 and 18).

Extraction of Six Upper Anterior Teeth

The remaining six upper anterior teeth were removed under local anesthesia, the clear base being used as a guide (Fig. 19). The gums were sutured but no pressure was used and little or no alveolar bone was removed (Figs. 20, 21, and 22). One-half tablet of penicillin was used topically in each socket. The denture was inserted (Figs. 23 and 24). The patient removed and washed the denture the following day. Very little swelling or discomfort manifested itself. In five days, the sutures were removed, the occlusion was checked by means of a check bite, and the denture teeth were ground where necessary. Healing was uneventful.

Completion of Duplicate Denture Six Months Later

Six months after the denture was completed, the second setup, which had been waxed up on completion of the first setup, was placed in position in the mouth. Impression paste was placed in it, and an upper impression (Fig. 25) and a centric relation wax were taken at the same time (Fig. 26).

When the first denture was completed, the lower model was not removed from its base so that it could be reset upon the Hanau articulator. The sagittal registrations remained the same, the lateral registrations remained the same; it was only necessary, therefore, to pour the upper impression and articulate it on the machine by means of a centric relation wax to the lower model. Any discrepancies in the occlusion were corrected at this time. Another check bite was taken directly in the mouth and rechecked on the machine, however, in order to be sure (Fig. 27).

The upper denture was processed in acrylic material. Before being removed from the model, it was set back on the machine and the occlusion was again checked (Fig. 28). The second denture was now placed in the patient's mouth and slightly spot ground where necessary. The first denture was rebased. The patient thus had two dentures (Figs. 29 and 30).

Summary

The following are the important points which this case brings out:

(*Continued on page* 576)

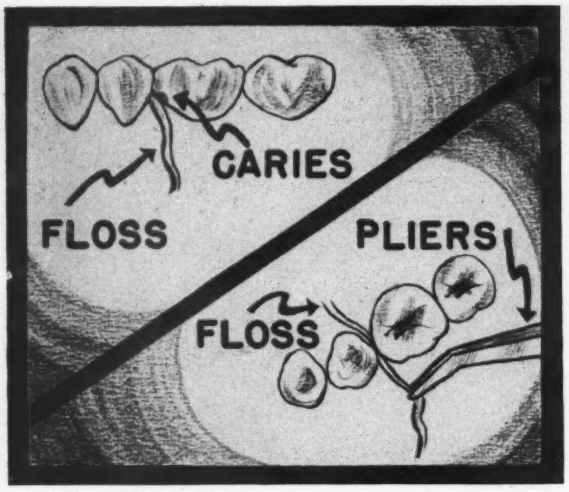


Fig. 1

Application of Silver Nitrate to Incipient Caries

Captain Robert J. Butz (DC), Camp Lee, Virginia

Fig. 1—Insert either ribbon floss or plain dental floss through the contact points into the interproximal area. Using cotton pliers, pick up a drop of ammoniacal silver nitrate in the beak of the pliers, touch the floss, and allow the silver nitrate to flow toward the tooth. Then draw the floss through the carious area, thus depositing a small amount of silver nitrate in the desired location. Apply eugenol or formalin in the same manner.

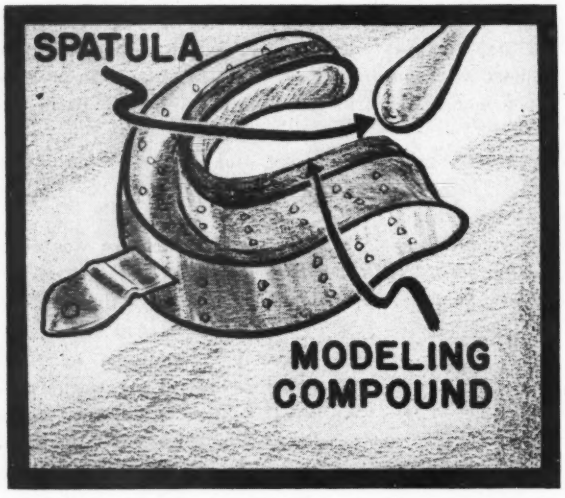


Fig. 2

Extension of Lingual Flanges on Impression Trays

Pedro G. del Valle, D.D.S., San Juan, Puerto Rico

Fig. 2—In using hydrocolloid or alginate impressions, it is sometimes desirable to extend the lingual flange of the tray. Warm modeling compound of proper size and attach to the tray with a hot spatula. Roughening the inner surface of the modeling compound with the hot spatula ensures better retention for the impression material.

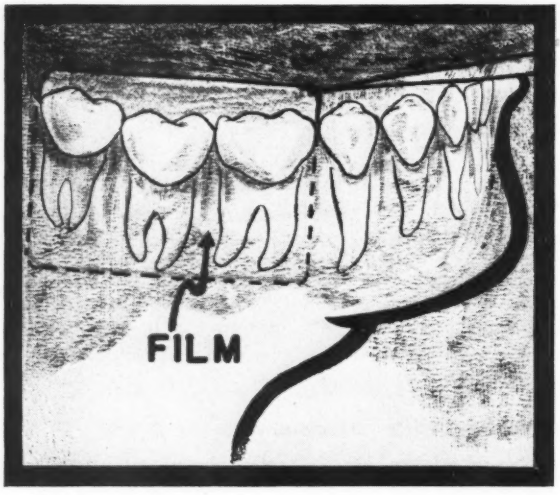


Fig. 3

Position of Film in the Lower Third Molar Area

Herbert H. Brown, D.D.S, Chanute, Kansas

Fig. 3—It is often difficult to place the x-ray film in proper position in exposing the lower third molar area. By clipping a hemostat to the top edge of the film and resting the instrument on the incisal edges of the lower anterior teeth, the film may easily be placed in the third molar region with minimal interference from the tongue.

Readers are Urged to Collect $10.00

For every practical clinical or laboratory suggestion that is usable, THE DENTAL DIGEST will pay $10.00 on publication.

You do not have to write an article. Furnish us with rough drawings or sketches, from which we will make suitable illustrations: write a brief description of the

...GGESTIONS . . . .

Denture Repair Without the Use of Tinfoil

Miss Irene Ruth Smith, D.A., Celina, Texas

Fig. 4—To repair acrylic dentures, run a model in stone. After the stone is set, remove the broken denture. Dry out the model on a hot plate and then paint it with cellulose triacetate or acetate. After the model is dry, coat with Johnson's paste wax. Rub thoroughly with a piece of cotton. This will do away with tinfoil.

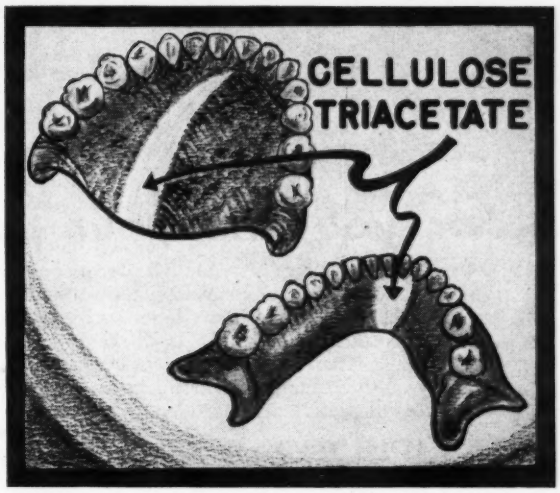


Fig. 4

A Circular Bur Block

Martin H. Berman, D.D.S., Floral Park, New York

Fig. 5—Save the containers that hold burs. Use a tin lid (from a jar or can about three inches in diameter to hold the containers in position as illustrated. The containers are held in place with sticky wax. Dental stone of a creamy consistency is flowed into the lid to hold the containers in a fixed position. After the stone has hardened, it may be painted with enamel of any color.

Fig. 5

An Amalgam Matrix

Herbert Alter, D.D.S., Brooklyn

Fig. 6—Using a piece of 40-gauge copper matrix metal, cut and fold as shown in the illustration. Dental floss is engaged in the folded ends. The metal matrix is ligated in position with the floss which is tied with surgeon's knot on the buccal aspect.

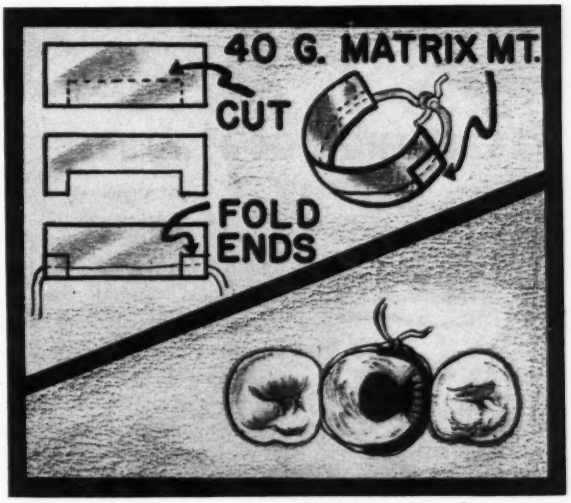


Fig. 6

technique involved; and jot down the advantages of the technique. This shouldn't take ten minutes of your time.

Turn to page 572 for a convenient form to use.

Send your ideas to: Clinical and Laboratory Suggestions Editor, THE DENTAL DIGEST, 708 Church Street, Evanston, Illinois.

ULTRA-VIOLET
PROTECTION

For you and your patients

A Castle "U-V" Light in your office reduces the possibility of spread of contagious disease caused by air-borne bacteria . . . minimizes the loss of man-hours due to such respiratory infections.

This scientifically designed "U-V" Light creates, well above head level, a lethal zone of ultra-violet radiation in which the majority of the bacteria, borne upwards on convection currents of air, are completely destroyed.

THE CASTLE "U-V" *also destroys many organic odors.* It "freshens" an office or waiting room. For full details, write: Wilmot Castle Co., 1122 University Ave., Rochester 7, N. Y.

The Castle "T-V" for color-corrected, shadow-reducing intra-oral light. ➡

The Castle "90" for safe, scientific sterilization. ⬇

Castle LIGHTS AND STERILIZERS

RESTORING GOOD MOUTH CONDITIONS

Mu-col

THE MU-COL CO.
Dept. DD-106
Buffalo 3, N. Y.

A cooling and soothing—as well as an effective—mouth wash for use after extractions or oral surgery is a great comfort to the patient. MU-COL, a balanced saline-alkaline bacteriostatic cleanser, is an effective aid in promoting prompt restoration of normal mouth conditions. A powder, quickly soluble it is convenient to use both by the patient at home or by the dentist at the chair.

MU-COL samples are available to dentists on request.

Contra-Angles

The President's Pivot Tooth . . .

In the memoirs of the Secret Service agent who guarded President Roosevelt, there is the story of the confusion that went on in the search for a "pivot tooth" before the President made a radio talk. Presumably Mr. Roosevelt went without this tooth in the times when he was not speaking over the radio. In these intervals, the tooth was hidden in a jewel box.

If Mr. Roosevelt had a "pivot tooth," he had a pulpless tooth. If he had a pulpless tooth, he had a potential area of chronic infection. If he had a chronic periapical infection, it may have been a focus that initiated the cardiovascular changes that preceded the cerebral hemorrhage that caused the death of Mr. Roosevelt.

At the time Theodore Roosevelt died in 1919 there was talk that his death was attributable to a dental infection that set up the chain of degenerative changes that resulted in his death: "The statement issued by Colonel Roosevelt's three physicians . . . reads that 'the cause of his death was embolus.' Embolus means a blood clot—a blood clot which has broken away from the place where it formed and has been swept on by the blood stream until it enters a blood vessel too small to permit it to pass. If this blood vessel happens to supply some vital center, then the results not infrequently occur with great suddenness.

"A supplemental statement by Doctor Richards (one of the physicians) suggests the cause of this clot. This statement is that bacteria or pus germs got into the blood stream from an infected tooth. While this tooth was removed, it was not removed until a large dose of germs had entered the blood stream and been carried to his

(*Continued on page* 565)

(*Continued from page* 560)

wrist. This was responsible for the so-called attacks of rheumatism from which Colonel Roosevelt suffered during much of 1918.

"It occasionally happens in so-called rheumatism that blood clots form sometimes in the veins and sometimes on the valve of the heart. These clots are called thrombi. Small pieces of such clots are liable to break off from time to time and form emboli.

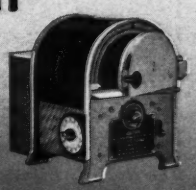
"The report states that Colonel Roosevelt had a similar attack previously. At that time the emboli or clots appeared to locate in some less important area. It usually happens that where the patient recovers from the first embolus, a second attack may be expected some weeks later."

Although Theodore Roosevelt and Franklin Roosevelt did not share the same political philosophy, they carried some of the same genes and familial dispositions to disease. The oldest son of Theodore Roosevelt died suddenly in France during World War II, presumably of acute disease of the cardiovascular system of the same general type that killed his father and his relative, Franklin Roosevelt. These three deaths would suggest that the Roosevelt biologic strain has a particular predilection to sudden death from cardiac or cerebral accidents.

At present there is an iron curtain of ignorance that hides the etiology of the degenerative diseases. Whether they originate from chemical, infectious, or psychogenic sources or from causes not now comprehended, we do not know. We are sure, however, that the degenerative diseases are the

JELENKO
PRECISION CASTING EQUIPMENT

Enables you to put *Every Step* in Dental Casting under *Simple*, Scientific, Finger Tip Control.



JELENKO
ELECTRIC HEAT TREATING AND ELIMINATING FURNACE
HEAT TREATING AND WAX ELIMINATING

And for Maximum Serviceability in Precision Castings, *Specify*
JELENKO GOLDS

J. F. JELENKO & CO., INC.
Dental Golds and Specialties
136 West 52nd Street, New York 19, U.S.A.

J. F. Jelenko & Co., Inc.
136 W. 52nd St., New York 19, N.Y.

Please send me descriptive and technical literature and prices on —

☐ Vacutrol; ☐ Jelenko Electric Inlay Furnace; ☐ Thermotrol; ☐ Jelenko Electric Heat Treating Furnace.

Dr. _____
Street _____
City & Zone _____
Please Print

USE LAVORIS

The Aristocrat of Mouth Washes

Mouth care is a habit — mouth health the result

The EASY way to subscribe to magazines

One letter will do it—no need to write to each publisher. At the same time, you'll be helping THE DENTAL DIGEST's good friend Dr. Russ Panzica whose long illness has kept him from practicing. But he won't quit trying to support his wife and little son.

You can send him your orders now, at publishers' regular rates; here are rates for several popular magazines:

The Reader's Digest, $3
Time, $6.50
Life, $5.50
Fortune, $10
Esquire, $6
Coronet, $3
Holiday, $5
Harper's Bazaar, $7 *for two years*
Look, $2.50

But that's not all. You can subscribe for your *other* favorite periodicals. It's not a bit too early to be thinking about Christmas gift subscriptions!

Please make your checks payable to the magazines themselves, but send to

RUSSELL PANZICA, D.D.S.
717 Seventh St.
Buffalo 13, N. Y.

(A penny postal will bring subscription prices on other magazines.)

ACRALAIN

INSURES MAXIM

ACRALAIN... *pioneer tooth-colored acrylic...*

Acralain—dentistry's pioneer tooth-colored acrylic—affords the perfect blending that makes your restorations a true rival of nature. For your convenience, *Acralain* is available in premixed shades to duplicate the shading systems of New Hue, Verichrome and Myerson teeth. It is also available in 12 Acralain shades and 6 basic shades, which provide a full range to harmonize with natural teeth.

Acralain is made by one of America's largest manufacturers of dental acrylics. We suggest that you order one of the economy-priced units described below.

Acralain Cabinet Package

Includes 12 cabinet size units of powder (one of each shade), 3 bottles of *Acralain* liquid, 2 bottles of *Acracote* (coating medium), 2 mixing jars, 2 droppers, description of controlled pressure casting technique, description of alternative split flask technique. Packed in beautiful wooden cabinet.

Price—complete—$38.50

Premixed Acralain Junior Kit

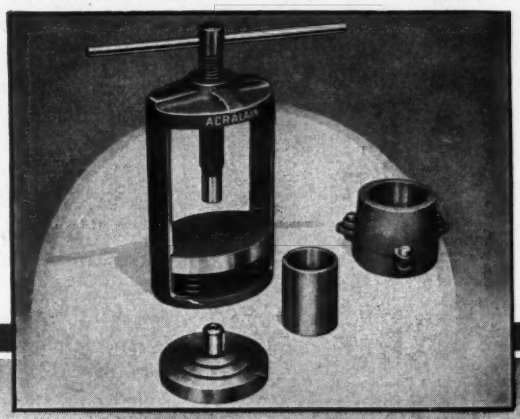
Premixed *Acralain* to match New Hue, Verichrome or Myerson Color Guides. Available in 5 assortments: 1. New Hue (12 shades); 2. Myerson (12 shades); 3. Verichrome (12 body shades); 4. Verichrome (12 incisal shades); 5 Verichrome (6 body shades; 6 incisal shades). Each assortment includes liquid, *Acracote* and 2 droppers.

Price of any assortment—$15.50

causes of the greatest number of deaths when people pass middle life. Degenerative processes are not acute. There is a preparation of tissue, subtle changes that occur in advance of the clinical expressions. Very likely long before the electrocardiographic tracings mean much, before chemical changes can be demonstrated, before signs and symptoms develop, the insidious seeds of degeneration are sown in the tissues.

To substantiate the theory that Franklin Roosevelt and millions of other people have a preparation for the disease that finally kills, I have before me a clipping dated November 17, 1937: "President Kept Abed Because of Tooth Infection. Washington, D. C., Nov. 17—(AP)—President Roosevelt still had a slight temperature from an infected tooth today and doctors ordered him to stay in bed. All engagements, including a press conference postponed from yesterday, were cancelled for the second succes-

M CURACY



Acralain Complete Casting Outfit—$21.50

WITH THE CONTROLLED PRESSURE CASTING TECHNIQUE

With *Acralain's* special casting equipment and technique, *Acralain* restorations are cast under continuous controlled pressure. This method assures restorations that are harder, denser, less porous and fit more accurately than when the ordinary split flask method is used!

Our research department will be glad to send reprints of articles and clinical reports on the use of *Acralain* for inlays, crowns, bridges and other restorations, as well as detailed information on the advantages of *Acralain's* exclusive controlled pressure casting technique. Send your request to the address below.

CRALITE • SUPERIOR PRODUCTS *for* MODERN DENTISTRY
ACRALITE CO., Inc., 230 W. 41 St., New York 18, N.Y.

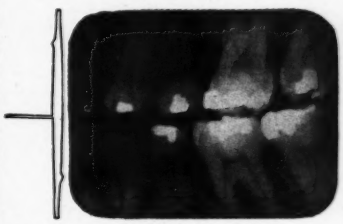
sive day. A farm speech the President was to have delivered at Mt. Vernon on the occasion of the seventy-fifth anniversary of the establishment of the Department of Agriculture and land grant colleges was turned over to Secretary Wallace to read for him. White House officials reported the President had a restful night after a sleepless one Monday night. Lieutenant Commander Arthur H. Yando, Naval dentist, treated the ailing tooth again this morning and when Captain Ross T. McIntire, Naval physician, found the slight fever continuing from yesterday ordered his patient to remain in bed."

A United Press report published the following day, November 18, reads: "The infected lower molar was removed today by Lieutenant Commander Arthur H. Yando, Mr. Roosevelt's dentist. Yando at first had hoped to save the tooth. McIntire reported that the tooth abscess had been 'rather large.' 'There is nothing to give us any alarm at all,' McIntire

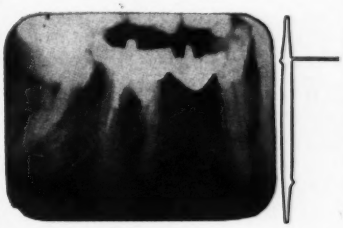
adapta
U. S. PAT. NO. 1,974,936
FILM HOLDERS
FOR SELECTIVELY POSITIONING DENTAL X-RAY FILMS

The only Patented Film Holder, is now available again!

adapta gives you BITE WINGS



or APICAL EXPOSURES



from your standard size X-RAY FILMS

- SANITARY
- NO SLIPPING of Film
- NO GAGGING
- ECONOMICAL

Box of 100 . . . $1.25

At Your Dealer
INTERSTATE DENTAL CO., INC.
NEW YORK 18, N.Y.
Sole Wholesale Distributors

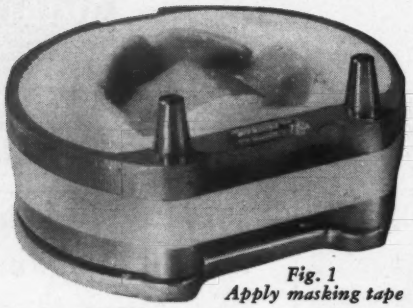


Fig. 1
Apply masking tape

An Improved Method of Processing Acrylic Dentures

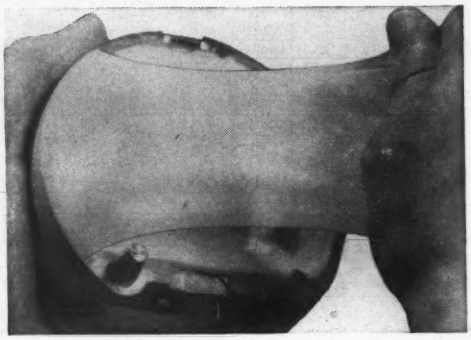


Fig. 2. Stick one end to tape and stretch

Hygienic Special Thin Dental Dam forms a perfect separating medium between model and material. It provides a velvety surface and accurate detail without wrinkles.

Two simple steps do the trick: (1) Attach a piece of masking tape with sticky side out on flask as shown in Fig. 1.

(2) Stretch a three-inch square of Hygenic Special Thin Dam over the denture and hold in place by sticking ends to masking tape as shown in Figures 2 and 3.

The results are perfect. You'll like this new and better method. One square yard of Special Thin Dam and 180 feet of half-inch tape in a Unit Box for $3.00. Order from your dealer.

The Hygienic Dental Rubber Co.
Akron 8, Ohio, U. S. A.

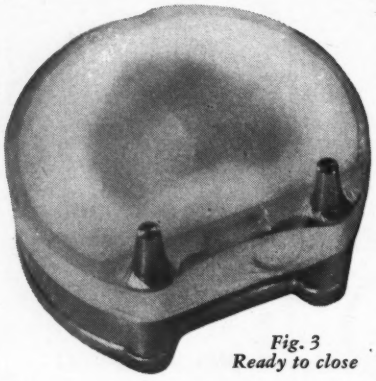


Fig. 3
Ready to close

Hygienic
Special Thin
Dental Dam

CONVENIENT—USEFUL—ECONOMICAL

For depositing cement in HARD-TO-GET-AT PLACES

Use of the Jiffy Cement Tube saves time—improves your technique. Just scrape cement from spatula into Jiffy Tube (Dia. 1), then place cotton pledget over the top of the tube and squeeze cement through tube directly into the spot you want to reach. (Dia. 2) Simple, effective. Also ideal for root canal work.

ORDER A BOX FROM YOUR DEALER TODAY.

LEE S. SMITH & SON MFG. CO., PITTSBURGH 8, PA.

said. 'The President has only one-half degree of fever and that should end almost immediately.' The abscess is draining nicely."

This nine-year-old story suggests that Mr. Roosevelt had a definite susceptibility to dental infection. In a person with a tendency to acute or subacute dental infections, we can say that the dental tissues show a low index of immunity and that, therefore, they are likely to be substantial sources of systemic infection. With such a background of disposition to dental infection, a dentist is not justified in temporizing with a tooth with a degenerative pulp or with one that is pulpless. Such teeth should be removed before they bombard distant parts with bacteria or thrombi. The constant assault of vital tissues with bacteria set loose in the circulatory system from an infected tooth may produce tissue changes that are irreversible. These irreversible changes may be the precursors of the so-called degenerative diseases.

When we begin to practice true preventive medicine, rather than the repair shop type of service that most of us now give our patients, we shall begin to see people in the totality of their personalities, with all the complex and varicolored factors that make up disease: familial and genetic patterns, environmental stresses on the body and mind, the individual variations of physical type and temperament. This is what is known as integral dentistry. Intelligent treatment demands that we consider people much more than persons who have dental caries, periodontal diseases, and replacements and restorations to be made. All disease is an end point of something that had its beginning in the past. If we understand the points of beginning, we can begin to practice true preventive dentistry.

The death of Franklin Roosevelt and millions of his fellow citizens of the world occurred on a definite day. But the preparation for his death began years before. The cerebral vessel that ruptured on a certain April day in 1945 was prepared for this accident by the degenerative changes that began years before. It may be that

YOU CAN'T MISS

when you use these

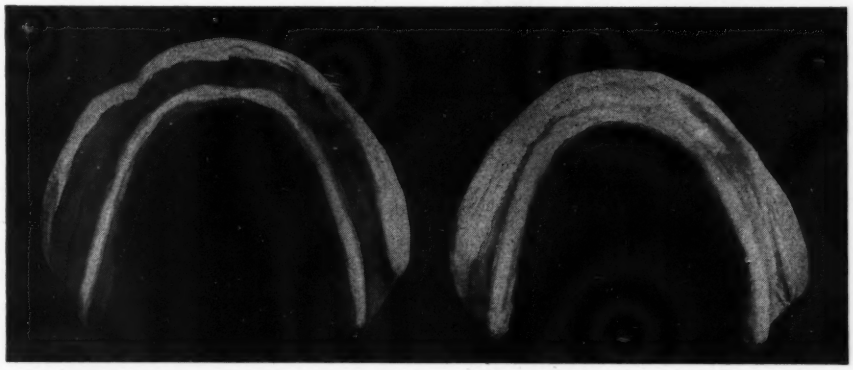
TWIN PRODUCTS

BETTER results have been obtained with OPOTOW IMPRESSION PASTE

NOW—another difficult step is taken care of with

OPOTOW PERIPHERAL PASTE

The photograph shows 5 impressions of the same mouth made with OPOTOW PERIPHERAL PASTE. Note the similarity of results—obtainable with no other material.



A PERFECT Peripheral Border — Taken with OPOTOW PERIPHERAL PASTE.

Same Impression, Completed with OPTOW IMPRESSION PASTE.

Order Now, Through Your Dealer.

INTERSTATE DENTAL CO., INC.

220 WEST 42nd STREET NEW YORK 18, N. Y.

For Further Particulars, Mail the Coupon in the Back of the Book

FOWLER'S COMPOUND #1

For the treatment of

PROCAINE DERMATITIS

Athletes Foot, etc., as used by, or under the control of, a dentist or physician.

1¼ oz. Nt. wt.....$1.00
4¾ oz. Nt. wt.....$3.00

FOWLER'S COMPOUND #2

For the care of

DRY AND ROUGH SKIN

A delicately scented emollient formula which is slowly absorbed for longer action and protection.

1¼ oz. Nt. wt.....50¢

L-F. U. S. P.

LANOLIN-FOWLER

FOR THE CARE OF THE HAIR AND SCALP

This formula contains 60% Lanolin and other proven constituents.

A little of this compound massaged to the scalp several times a week, will keep the hair healthy and well groomed.

1¼ oz. jar 50 cents.

Until sufficient quantities are available for general distribution, one jar of each formula (small #1) will be mailed postpaid upon receipt of $2.00 C.O.D.'s postal charges extra. Not less than a $2.00 order.

FOWLER CO., INC.

Box 5343, Metro. Station, Los Angeles 55, California

PLASTOGUM

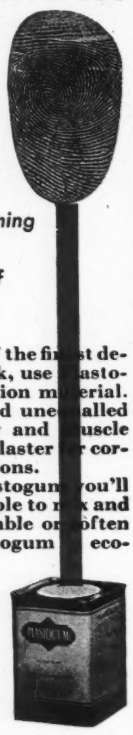
Assures finest detail

Easy to mix

Is pleasantly flavored

Accurate muscle trimming

Accurate recording of periphery



For exact registration of the finest detail in full denture work, use Plastogum—the ideal impression material. It is highly accurate and unexcelled for recording periphery and muscle trimming. Superior to plaster for corrective or wash impressions.

Once you've used Plastogum you'll always prefer it. So simple to mix and handle, it will not crumble or soften from absorption. Plastogum is economical to use and patients like its pleasant flavor and the fast, easy way you can take impressions without discomfort. Try Plastogum. Write today for your *free sample*.

FREE Sample

HARRY J. BOSWORTH COMPANY
1315 S. MICHIGAN AVENUE · CHICAGO

AMES PLASTIC PORCELAIN

Gives more strength and durability as well as stain resistance and translucency. Sold only in single units of powders and liquids. Write for technical booklet.

THE W. V-B AMES CO.
FREMONT, OHIO

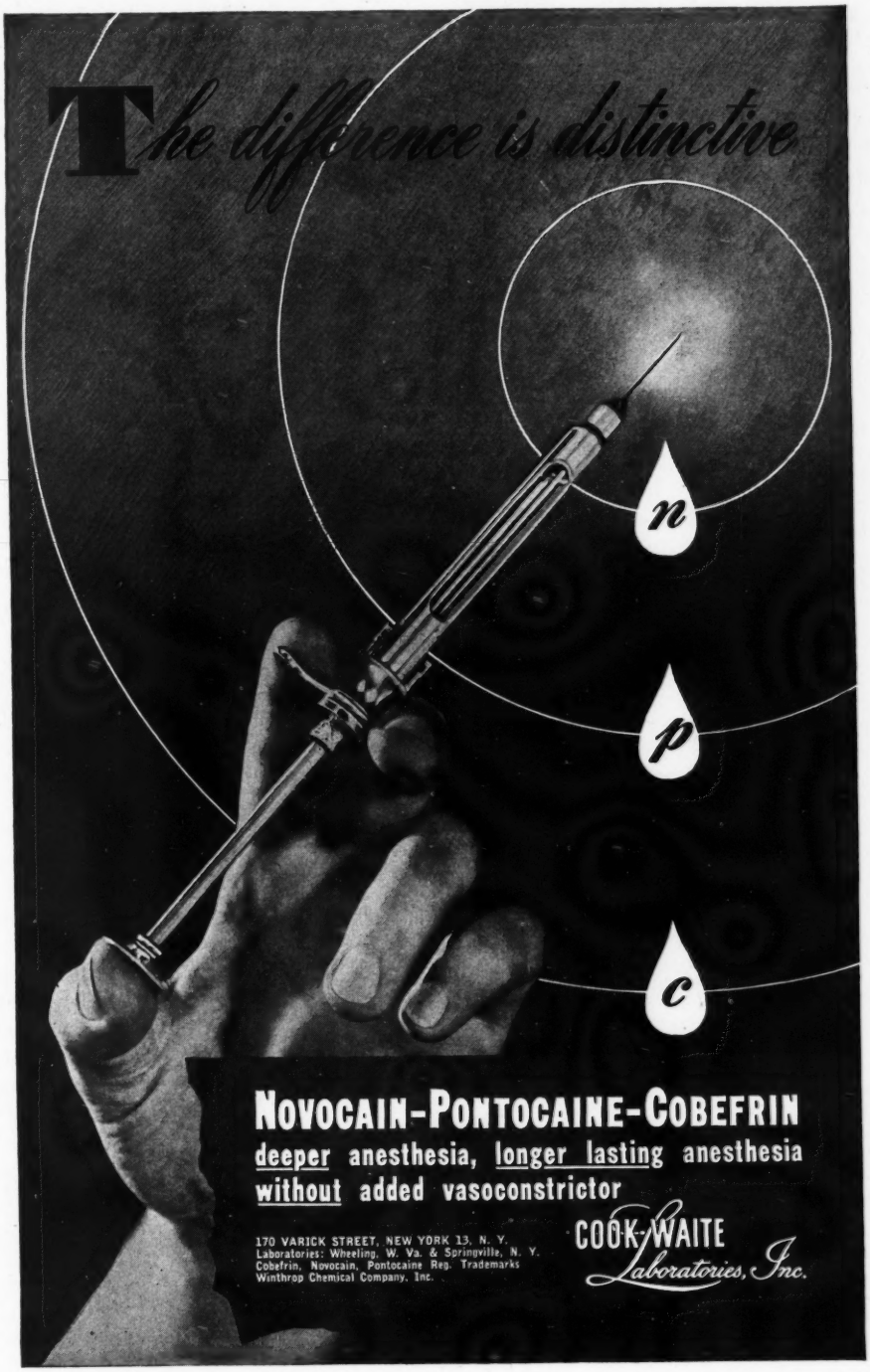
the first break in the defensive armor of the body came when the protective tooth enamel was destroyed that allowed bacteria to enter the dentine, the pulp, and the blood stream. Dental disease and dental treatment should take on more significance when we see dental disease in this newer, clearer, and broader vision.

Hot Air Over the Vocal Cords . . .

Several serious business analysts blame the recent stock market collapse on a broadcast made by one of the blabber mouth radio commentators. It isn't a robust economic system that can be jarred and shaken out of millions of dollars of stock values by the frenzied prophecies of a loose-tongued radio speaker who came to his present position by way of keyhole peeping and rumormongering. Since when would this kind of background prepare one as a specialist in economic and world affairs? If we have another war, it may come because we talk too damn much—everybody talks too damn much about too many things that he knows nothing about.

I have no idea what Mr. Stalin is thinking about at this moment or King George or the guy who used to be called the Mikado. I presume that these gents keep their ideas pretty much to themselves and to the small circle of their associates. We have ambassadors and agents throughout the world whose business requires that they keep their eyes and ears open and report to the appropriate federal agents in Washington. Our foreign policy should be formulated by our State Department rather than by radio blabber mouths who pick up their information in the latrines or, in what are synonymous with them, the night clubs.

Freedom of speech is a great thing. But I think that we have all overdone it. I catch myself pontificating on subjects that I know nothing about—the atomic bomb and affairs in Iraq are typical examples. I suppose it is all right to hand out opinions on all subjects provided we label these guesses and opinions and do not confuse ourselves to the extent that we think we are making statements of fact. If I


The difference is distinctive
n
p
c
NOVOCAIN-PONTOCAINE-COBEFRIN
deeper anesthesia, longer lasting anesthesia
without added vasoconstrictor
170 VARICK STREET, NEW YORK 13, N. Y.
Laboratories: Wheeling, W. Va. & Springville, N. Y.
Cobefrin, Novocain, Pontocaine Reg. Trademarks
Winthrop Chemical Company, Inc.
COOK-WAITE
Laboratories, Inc.

CLINICAL AND LABORATORY SUGGESTIONS

Form to be Used by Contributors

To: Clinical and Laboratory Suggestions Editor
THE DENTAL DIGEST
708 Church Street
Evanston, Illinois

From: _____

_____

Subject: _____

Explanation of Procedure:

Sketch:

$10 will be paid to author on publication of accepted suggestions.

preface a profundity by saying, "I don't know a damn thing about nuclear fission but I will tell you all about the atomic bomb," I am telling you that I am talking just to hear the flow of hot air over my vocal cords. That is what most of us do most of the time to the confusion of the world.

There are only a few things that we can know much about in a lifetime and the more we know about them, the more convinced we are of our ignorance. If you want the answer to anything, ask a sophomore; he knows everything. But if you can't find a sophomore, settle for a radio commentator.—E. J. R.

Sulfanilamide and Gum Tragacanth in Immediate Denture Prosthesis

L. A. WESTWATER, L.D.S.
Edinburgh

Technique

AFTER extractions under general anesthesia, the following technique was used in twenty-five cases:

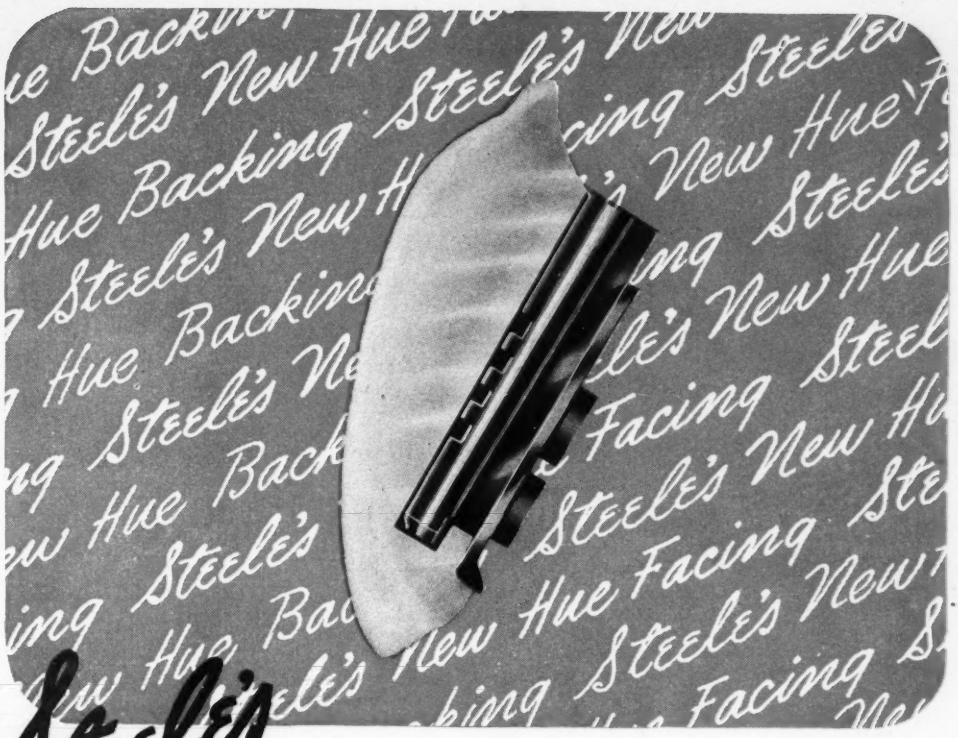
1. The denture was sprinkled liberally with powdered gum tragacanth containing 5 per cent sulfanilamide.
2. It was then inserted in the mouth before the patient recovered consciousness.
3. After twenty-four hours, the denture was removed and cleaned, the mouth gently syringed with dilute H_2O_2, and the denture, again sprinkled with powder, re-inserted.
4. This procedure was repeated three more times, after which the patient was allowed to use the powder himself for at least another week.

Results

1. In no case did any clot break down.
2. There was unusually rapid healing without the usual fetor.

Further Research

A periodic checkup of the powder is being carried out by means of culture tests. As a result of some work



Steele's

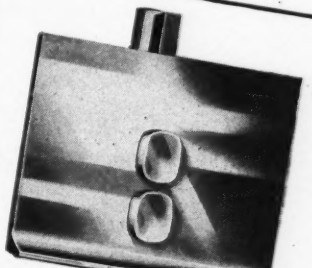
P.B.E.

PORCELAIN BITING EDGE

INTERCHANGEABLE FACINGS

- PERFECTLY NATURAL
- AMPLY STRONG AND SERVICEABLE
- READILY INTERCHANGEABLE*

Highest esthetic standards require porcelain biting edges on all anterior restorations, fixed or removable.



***NOTE:** Steele's P.B.E. (porcelain biting edge) facings are not interchangeable unless used with Steele's P. B. E. backings with their heavy supporting flange.

COLUMBUS DENTAL MFG. CO., COLUMBUS 6, OHIO

Distinguished

JELENKO GOLDS

for 1-piece and Unit Castings, Clasps, Bars, Saddles, etc.

JELENKO NO. 7 CAST GOLD
REG U.S PAT OFF

The Patrician of Casting Golds
Gold Color

A gold with exceptionally fine working and casting qualities, unsurpassed in strength, resiliency and precious metal content.

for All Crown and Inlay Abutments.

FIRMILAY
REG. U.S. PAT. OFF

The Easily Burnished Type C Gold — Hard — Gold Color

A Certified Type C Gold with a high Burnishability, even when heat treated.

CAST BY THERMOTROL

J. F. JELENKO & CO., INC.
Dental Golds and Specialties
136 West 52nd Street, New York 19, U.S.A.

per DWT.
Jelenko No. 7....$2.05
Firmilay $2.05

Notice to Subscribers
In The Philippine Islands:

Effective January 1947 the subscription rate in your country will be $3.75. The additional 75c represents extra postage we now pay to send copies to you.

THE DENTAL DIGEST 1005 Liberty Avenue Pittsburgh 22, Pa.

which has been done by the Clinical Research Laboratory, Royal Infirmary, Edinburgh, it has been found possible to sterilize the powder in a dry oven at 150°. Subsequent culture tests have proved negative.

—From Practical Notes, *The British Dental Journal*, 80:229 (April 5) 1946.

Specific Infections of the Hand in Dental Surgeons: Notes on Three Cases

(*Continued from page* 543)

strychnine were commenced. These were continued for about two weeks and a gradual improvement in general condition resulted which permitted the patient to resume work on October 4.

Working as a medical officer, I have seen many cases of ectopic diphtheria in both wars. In 1915-18 and in 1940-45 the so-called "desert sores" of the skin were frequently found to be infected with the Klebs-Loeffler bacillus and sequelae were not uncommon; the case noted above is the first of this kind that I have seen in a dental surgeon.

Case 3.—Actinomysis Infection

On July 22, 1936, a scaler punctured the ball of the thumb of a dental surgeon as the instrument was being replaced on the bracket table. The surgeon washed the wound and painted it with iodine. Pus was noticed the same night. After daily fomentation, the wound quickly healed.

Two months after the original infection, a small nodule was noticed near the site of the puncture. The swelling, which was not accompanied by pain, was incised on two occasions and dressed antiseptically. Bacteriologic examination of the pus revealed nothing untoward. The swelling had a tendency to track towards the wrist and eventually, on October 29, a surgeon thoroughly opened the thumb. Swabs were taken and tissue was examined. The bacteriologist reported presence of streptothrix in the pus and tissue examination confirmed infection with the ray fungus.

On November 3 the thumb was opened by a five-inch incision, and all the doubtful tissue removed by dis-

GRADED ACTION

to suit the needs of your patients

APERIENT

LAXATIVE

CATHARTIC

A Product of BRISTOL-MYERS COMPANY • 19EN West 50th Street, New York 20, N. Y.

section. Healing was uneventful and on January 1, 1937, the dental surgeon returned to work with no loss of function and no disfigurement save a thin line showing the incision site. Postoperative treatment consisted of internal medication with Ingol's iodine in milk (60 drops daily). There was no recurrence.

This case gives the characteristic picture of an actinomycetic lesion in the early stage.

—From *The British Dental Journal* 80:367-368 (June 7) 1946.

Treatment Plan For a Difficult Immediate Denture

(*Continued from page* 557)

1. In cross bite cases with difficult occlusal curves which require immediate dentures, it is necessary to build the upper and lower restorations at the same time in order that patients may register their own condylar movements. These movements should guide future restorations.

2. The patient should be made comfortable during the try-in procedures by the use of temporary partial, removable, and fixed restorations.

3. Complete fixation of bridges is possible even though the abutments cannot be paralleled. Multiple abutments should be used where weakness is demonstrated. Acrylic occlusal surfaces should be protected by gold struts to prevent occlusal wear of the soft material.

4. In order to prevent rapid resorption, the posterior teeth should be removed first and the tissues permitted to heal several months, if necessary, before proceeding with the anterior extractions.

5. Little or no bone need be removed in order to prevent severe alveolar absorption. Too much bone is usually removed.

6. Facial character should be preserved even though the teeth are considerably modified.

730 *Fifth Avenue*

It's easier with the NARGRAF

There are *five* reasons why operations are easier with the Nargraf:

1 *Quicker and Easier Anesthesia*—The Nargraf intermittent flow principle co-ordinates the flow of gas with the patient's respiration and assures a steady flow of gas with every inhalation.

2 *Greater Operating Efficiency*—The Nargraf automatically adjusts the flow of gas to the breathing rate, thus relieving the operator of the necessity of adjusting the flow to every change in the patient's respiration.

3 *Simplified Control*—One valve controls the flow of both nitrous oxide and oxygen; another controls pressure. Only *two* adjustments are necessary.

4 *Prompt Reaction to Dosage Change*—With the Nargraf, a change in dosage reaches the patient almost instantly.

5 *For Anesthesia and Analgesia*—The Nargraf can be equipped with a patient-control bulb for analgesia.

Know the Nargraf, and the Nargraf will be your choice of a gas machine.

NARGRAF EUTHESOR EASOR

THE MERIDEN APPLIANCE CO. MERIDEN CONN. N_2O O_2 TOLEDO O. U.S.A.

BUY SAVINGS BONDS

NEW Flossy

Plastic Designs

6 Models 50c to $50.00

Safe way to clean between teeth with a bite

Professional Introductory Assortment $1.00 Postpaid

Also regarding New Amalgamator. Send for circular. $15.00 exchange allowed on any used machines.

FLOSSY DENTAL MFGS., Dept. 108
228 S. WABASH CHICAGO

Others Have Tried BS POLISHERS Why Not You?

Many dentists have sent in the coupon below and found out why BS Polishers are preferred over many others. They can readily understand why this soft, flexible rubber polisher makes a patient feel safe and comfortable, also why it is easy for it to clean and polish every tooth to a lustre brightness. Why don t you find out these facts for yourself? Send the coupon in now!

BS POLISHERS ARE SMALLER AND MORE CONVENIENT TO USE

Young Dental Mfg. Co.
St. Louis 8, Mo.

Gentlemen:
Without any obligation send us one of your BS POLISHERS — ABSOLUTELY FREE.

NAME.....
ADDRESS.....
CITY.....
STATE.....